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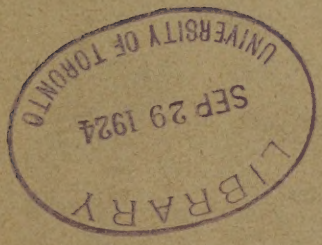
PROCEEDINGS

FOURTH ANNUAL SESSION

of the

OHIO STATE EDUCATIONAL CONFERENCE

Keynote:
Standards in Education



Thursday, Friday, and Saturday
April 3, 4, and 5, 1924

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THE OHIO STATE UNIVERSITY BULLETIN

PROCEEDINGS OF THE THIRD ANNUAL
OHIO STATE EDUCATIONAL CONFERENCE

Keynote: Standards in Education

OHIO STATE UNIVERSITY
COLUMBUS, OHIO
1924

THE FIFTH ANNUAL EDUCATIONAL CONFERENCE
AT OHIO STATE UNIVERSITY

April 2, 3, and 4, 1925

Keynote: Democracy in Education

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TABLE OF CONTENTS

General Sessions

		Page
Thursday, April 3		
Standards in Education	*B. R. Buckingham*	7
Success, Personality, and Intelligence	*W. W. Charters*	24
Friday, April 4		
Inflation in Education	*T. C. Mendenhall*	32
Forgotten Fundamentals	*Wm. McAndrew*	48
Saturday, April 5		
Standards in State Educational Administration	*T. E. Finegan*	64
Standards in Education from the Viewpoint of Social Service	*E. C. Hartwell*	78
Pedagogues and Politics	*Wm. McAndrew*	86

Section Meetings

AMERICAN AND EUROPEAN HISTORY		
Standardizing Instruction in High-School History	*R. M. Tryon*	96
ART		
Visual Instruction	*Alfred Abrams*	102
Shall Ohio Have a Department of Visual Instruction?	*Otto Ege*	104
BIOLOGICAL SCIENCE		
The Problem Method in Science Teaching	*H. W. Nisonger*	106
Demonstration of Some Methods of Handling Problems in Biology	*W. M. Barrows*	112
Some Problems of the Problem Method	*H. C. Sampson*	114
The Lower Limit of Training for Teachers in Secondary Biology	*B. M. Davis*	116
CITY SUPERINTENDENTS		
Economies in School-Building Construction	*B. O. Skinner*	121
Economics to Be Effected in the Supervisory and Administrative Organization	*E. D. Roberts*	127
	C. R. Reed	136
Economies to be Effected by the Reorganization of the Teaching Load in the High School	*F. J. Prout*	141
The Outlining of Some Plan Whereby Adequate Financial Support Through Taxation May Be Assured to the Public Schools	*G. C. Dietrich*	146
	E. V. Bowers	150
	W. A. Walls	152
CLINICAL PSYCHOLOGY		
Classification of Mentally Deficient and Retarded Children for Instruction	*J. E. W. Wallin*	154

TABLE OF CONTENTS—Continued

		Page
The Application of Scientific Methods in Welfare Work	*Burdette G. Lewis*	156
Applications of Clinical Psychology to the Treatment of Delinquency	*C. W. Hoffman*	166
COMMERCIAL EDUCATION		
The Intelligence Quotient Used as a Basis for Vocational Guidance	*F. A. Harrison*	170
The Social and Economic Need for Vocational Guidance	*D. L. Sollenberger*	171
Position, Pupil, and Preparation	*J. W. Smith*	173
COUNTY SUPERINTENDENTS		
Fundamental Objectives in Curriculum	*O. G. Brim*	175
Objectives in Organizations	*S. K. Mardis*	176
Students' Activities as Related to the Course of Study	*E. C. Seale*	180
Correlation of the Course of Study in Hygiene with Community Interest	*Helen M. Rice*	184
EDUCATIONAL AND INTELLIGENCE TESTS		
Some By-Products of Tests	*U. L. Light*	187
Some Materials Found Effective for Remedial Instruction in Arithmetic	*J. R. Patterson*	189
Difficulties in Problem Solving	*P. R. Stevenson*	190
Cleveland's Testing Program	*C. H. Mann*	194
Educational Tests, the Foundation of Educational Aims	*C. S. Berry*	197
Educational and Intelligence Test Demonstration	*Luella C. Pressey*	201
ELEMENTARY PRINCIPALS		
Standards by Which We Judge the Work Habits of Elementary-School Children	*Margaret Conley*	203
Remedial Cases	*F. W. Dearness*	204
ELEMENTARY TEACHERS		
Reading Instruction in the Elementary School	*Wm. S. Gray*	207
Increasing Reading Ability	*Marie Ryder*	216
An Appreciation Lesson for Sixth-Grade Pupils	*Emma Cooke*	217
ENGLISH		
A Program for Oral English	*Barbara G. Spayd* *Ruth Bradley*	218 221
A Project in Journalism	*Lucy Patterson*	225
Reading with High-School Freshmen	*Bertha E. Ward*	226
Contemporary Literature for High-School Seniors	*Laura V. Edwards*	228
The Value of Use of Personal Conferences	*Sada Harbarger*	233
Theme-Marking: How Much? To What End?	*W. L. Bissell*	240

TABLE OF CONTENTS—Continued

		Page
HIGH-SCHOOL PRINCIPALS' ASSOCIATION		
A Democratic School Administration	*V. T. Thayer*	242
What is the Matter with the High School?	*Chas. H. Lake*	246
Discussion	*E. D. Roberts*	250
Ohio High-School Athletics	*J. W. Wilce*	252
HOME ECONOMICS		
Training Children in Budget-Making	*Grace G. Walker*	257
INDUSTRIAL AND VOCATIONAL EDUCATION		
Part-time Education and the Public Schools	*R. O. Small*	261
What Industry Expects of Graduates of Industrial Courses	*R. H. Sweetser*	276
JUNIOR HIGH-SCHOOL PRINCIPALS		
Taking Stock of the Junior High School	*V. T. Thayer*	280
Ability Grouping from the Administrator's Viewpoint	*C. R. Wise*	284
Social Problems Involved in the Junior High School	*W. W. Wager*	287
The Place of Extra-Curricular Activities in the Junior High School	*W. A. Evans*	290
LATIN		
Who Should Study Latin?	*E. T. Sage*	293
A Comparison of Some Recent First-Year Tests	*Hazel Murray*	294
Experimenting with Caesar Classes	*Elinor J. Barnes*	295
High-School Latin Under the Compulsory Education Law	*H. L. Senger*	295
MATHEMATICS		
The Course of Study in Junior High-School Mathematics	*Emma Kersting*	297
Adapting Geometry to the Present Tenth-Grade Pupil	*W. E. Lattin*	300
MODERN LANGUAGE		
Standards in Modern-Language Teaching	*J. P. W. Crawford*	306
NON-BIOLOGICAL SCIENCE		
Why Shall We Teach Science?	*C. H. Lake*	308
Some Suggestions on Teaching Students How to Study	*C. W. Foulk*	310
Physiography in Its Relation to Physics and Chemistry	*F. A. Carlson*	314
The Importance of Science in High-School Education	*M. A. Bigelow*	315
PHYSICAL EDUCATION		
MEN'S SECTION		
Intramural Athletics	*G. P. Ward*	319
A Study in Measuring Ability of Students in Relation to Various Types of Instruction in Physical Education	*Thomas Neil*	322

TABLE OF CONTENTS—Concluded

	Page
Care and Treatment of Athletic Injuries...*W. F. Roberts*	324
The Ohio Relays .....*G. M. Trautman*	328
WOMEN'S SECTION	
Dancing and Its Place in the Curriculum...*Margaret Cheney*	329
SCHOOL LIBRARIANS	
The School Library and the Teacher.....*Estella M. Slaven*	333
How the Junior High Library Differs from That of the Senior High School.....*Edna M. Hull*	335
How We Teach the Use of the Library....*Helen V. Lewis*	336
SPECIAL EDUCATION	
Changing Standards in Special Education..*C. S. Berry*	341
The Wider Meaning of Special Education...*Wm. J. Ellis*	344
Social Objectives for Subnormals.....*E. R. Johnstone*	348
TEACHER TRAINING	
Supply and Demand in Teacher Training...*B. R. Buckingham*	355
The Plan of Cooperation between the Board of Education of Athens and the Ohio University for Observation and Practice Teaching .....*A. F. Myers*	358
Ways of Developing Initiative in the Student Teacher .....*A. L. Suhrie*	363
State System of Certification of Teachers..*T. E. Finegan*	368
Discussion	379

GREETINGS

THE UNIVERSITY Faculty, and especially those in the College of Education, have been greatly enheartened by the reports that have come in from superintendents and principals concerning the previous Educational Conferences. The University has, on these occasions, tried to set up a meritorous program, and we are greatly gratified that the efforts have been appreciated by the public-school officers of the State.

I am happy now to extend a most cordial invitation to all executive and superintending officers in the cause of education, to principals of high schools, and to teachers, to attend the Fourth Educational Conference at the Ohio State University, on April 3, 4, and 5. Every effort is being put forth to present a program worthy of your time and attendance. Let me assure you of your most cordial welcome on the campus, and also of our earnest desire to be of any possible service to the cause of education in Ohio.

W. O. THOMPSON,
President

GENERAL SESSIONS

GENERAL SESSION
THURSDAY, APRIL 3

STANDARDS IN EDUCATION

B. R. Buckingham
Ohio State University

Perhaps it is because of the industrial application of the idea of standardization that many sterling school people have been unable to approach with an open mind the question of standardization in education. They are quite sure that they do not want standards set up in their schools. They have their minds upon standards in industry—standards whereby a number of operations are reduced to a few processes; standards whereby products are made to exact dimensions. Perhaps when they think of standards they call to mind motion studies in the manual trades and, in the factory, jigs and dies and interchangeable parts. No doubt they are ready enough to admire the accuracy with which machine parts may be turned out accurate to a thousandth of an inch. Very likely in 1917 and 1918 they applauded the government's ship-building enterprise when the fabricated vessel was evolved, and when quantity production was assured through having standardized plates made inland and delivered to the ship-yards to be assembled. Doubtless they approve of these things, and they can even become enthusiastic about them; but the standardizing of children, they say, the molding (molding is the word, is it not?) of pupils in conformity with a pattern—this seems to them to be monstrous.

At the outset, therefore, I should like to say that I am as vigorously opposed as these people are to the effort to cast children in the same mold, either physically, intellectually, or morally. The school is not a factory; and from it children are not to be turned out, each the same as the other, like buttons from a mill.

The fact is, however, that since the standardization movement in the sense in which we usually recognize it began to develop in school work some twelve or fourteen years ago,

greater respect for individuality, greater deference to initiative, and greater appreciation of personality, has been shown than was ever shown before in the history of education. It is not without significance that the intelligent training of physically and mentally handicapped children has been carried to its present development precisely during the period of the measurement movement. The identification of the gifted child, even under untoward circumstances, the appreciation of him, and the moral conviction of the injustice we have done him has come about in the same period. This salvage of priceless human material by modern measurement procedures is in itself one of the most attractive as it is one of the most hopeful of the many by-products of standardization.

Indeed the discovery and development of unusual talent is the greatest conservation movement in which the nation can be engaged. It is greater than the conservation of forests, of coal, or of oil; for all of these are important only as they minister to man; and man is distinguished from the brute creation precisely in the matter of his mentality. Otherwise he is a weakling. He is neither very strong nor very swift. He does not hear very well and his sense of smell is atrophied. If you are concerned with the maintenance and growth of our national possessions you cannot be indifferent to the greatest of them all, the resources of intelligence. The value of coal and water power and seal fisheries are indeed expressed in dollars; but no value is put upon intelligence, for it is priceless. There is nothing more fundamental in the way of national resources than the sum total of available intelligence.

The point I am trying to make is that education as adjustment—and it was so defined long before standardization became a shibboleth—demands something to which to adjust. You cannot get along without norms of some kind. To do so is to work without chart, compass, or guiding star. In reality we do no such thing. We have standards—we all have them. Without them we should be merely on our way without knowing where we were going. The issue is not between standards and no

standards; but rather between good standards and bad standards or between definite standards and indefinite standards.

And if we adopt another definition of education and say, as many do, that it is change, then we are still dependent upon standards to tell us in what direction we are to cause change to take place, how far we are to carry it, and especially which of all the thousands of changes that might be made, ought to be made and in what order.

Now, if I say that standardization, instead of making children alike, really takes account of their differences, I should be able to give a reason for my statement. I think I can do so. It seems to me to be clear that you cannot make any kind of adaptation of instruction to those who are below or above standard until you know what the standard is. And you can succeed vastly better in your adaptation if you can know this standard in such a way that there is no dispute about it. If it is intelligence that concerns us, we shall need a measurement of intelligence of greater reliability than the estimate of the street or even of the school. If more accurate adjustment of teaching is needed than that which can take place through the knowledge that a child is above or below type, such an adjustment clearly cannot be made unless we know how much he deviates from type. If you will apply what I have just said not only to intelligence but to abilities of all sorts, to appreciations, attitudes, and skills in all the subjects and parts of subjects with which the school deals, and if to these you will add the physical as well as the mental and emotional qualities, you will find, I think, that standards instead of formalizing your work, will in reality make you intelligent about it. I think you will find that your attitude as teachers becomes less rigid, that you tend to do less mass teaching and more individual teaching, that you tend to know each of your pupils intimately and expertly, and that with this knowledge you become versatile in the technique of teaching.

The opposite condition is well illustrated by the small boy who came home from school with a bad report card. It was evident that he was at the bottom of his class. The father was much concerned and he undertook to labor with the boy, trying

among other things to inspire him with an ambition to stand at the head of his class. The futility of the procedure became apparent, however, when the boy summed up the situation by saying: "What's the use, dad? They teach the same thing at both ends of the class."

I have said that the issue is between good standards and bad standards. One of the qualities which makes a standard good is definiteness. What do we mean when we say that a child is bright, or that a teacher's salary is high, or that a textbook is well planned? Do we not each of us have worked into our consciousness a sort of standard by which we judge these things? Yet, to a large degree these standards differ and in consequence, though we use the same terms, we use them with different meaning. Our judgment of salaries or of the heights of men, or of the ability of children to spell would be very much refined if our concepts in respect to these things had been carried out upon identical original data. Suppose, for example, we gather measures of the heights of Anglo-Saxon men—men whom we have never seen and whom other people measure for us, vastly extending by these means the range and number of our observations beyond those which we could possibly make personally. From these measurements we are permitted to determine the average height of these men, and, owing to the large number of cases at our disposal and the precision of the method applied, the result undoubtedly gives us a far more accurate notion of the "Man of Average Height" than mere personal experience could ever afford.

But our judgment as to whether a man who is above or below the average shall be called tall or short, and as to whether he is moderately or excessively so, depends not only upon how much taller or shorter he is than the average, but also on the closeness with which the heights of all men are found to group around the average. If most men did not depart from the average by more than one inch, then a man who was two inches above the average would unquestionably be tall. He would, in other words, possess height to an excessive degree. But if it were not unusual for men to differ from the average by four or five inches, then a

person two inches above the average would not be unusual, and under these circumstances, we should not call him tall.

Those of you who are following me closely will observe that I am reaching toward a statistical treatment of observed data. In all the measureable types of product and process with which the teacher or anyone else deals, judgment concerning amounts depends, in the final analysis upon two sorts of information. One is the type, to which statistics gives the name, average; the other is the extent to which a thing may depart from its type without becoming unusual. For this idea statistics provides the measure of variability. Both the average and the measure of variability, —that is, both the type and the usual or allowable deviation from it—are standards. These are the kinds of standards which have been conspicuously set up in education as in other fields during recent years. There is nothing far-fetched, nothing cryptic about them. They simulate conceptual activity. The very essence of our intellectual processes is statistical. My concept of a table or a chair is made up of type and variation. But both type and variation must, just as in statistics, be determined by the original observations. My idea of a chair differs from the idea to which you give the same name according to our experience, and also—although this is another story—according to our experiencing natures. But, although our ideas of a chair probably differ to some extent, our experiences from which these ideas have been developed are so nearly alike in this locality so that we understand each other pretty well when we speak of a chair. But if we talk of skill in typewriting, or ability to add, or a competence in chemistry, we all know to what fatal degree our ideas differ and confound us.

What the measurement movement with its definite standards has really permitted us to do is to think more nearly the same thoughts when we use the same language. I cannot imagine anyone preferring, in the name of individuality or culture or philosophy, to think less definitely than he may about anything that may become the subject of thought.

Standardization of the right sort—and it is only of such standardization that I wish to speak—was once defined by Judd

as "a mode of development which nature has shown to be advantageous." This is a true conception of standardization and we employ it in every act of our lives. The average adult male is about 68 inches tall, and the female two or three inches shorter. Everything about us is adjusted to this end and to other similar standards. The carpenter who came in the other day and adjusted coat hooks in my office did not put them nine feet from the floor or three feet. He adjusted them to the standard height of human beings. Beds are made to fit the folks who sleep in them. Desks are thirty inches high and chairs eighteen, because these dimensions are adaptable to human anatomy. Chandeliers are generally—though not always, I am sorry to say—high enough so that we don't bump our heads when we walk under them. The air we breathe is four-fifths nitrogen and one-fifth oxygen. Our hearts beat seventy-two times a minute, and we breathe about eighteen times a minute, yet no one quarrels with these standards. Bodily temperature is standardized, and the variations from it are suprisingly small, yet no one asserts his individuality by craving for his own part something different from ninety-eight and six-tenth degrees.

It is so in education. There is a standard time for teaching reading, and if a child is not six years old mentally, we must wait until he is. You cannot teach the theory of relativity to a ten-year-old child because his mentality is not equal to it. You can't get three-year-old children to form a football team, because they have not reached the level of group activity. You do not attempt to teach long division in the second grade nor chemistry in the fifth nor calculus in the eighth. Nature has imposed certain standards which we must observe.

Standards as the expression of nature at work may be likened to habits. They are like habits in a number of ways and in this way particularly: they release energy for other purposes. Let us consider handwriting. This was one of the first school subjects to be standardized. Now, the ability to write is an important skill in the sense that society demands it universally. We cannot easily evade this demand. Accordingly, writing used to be taught with great effort and with great expenditure of time. Moreover

every child, no matter how well he could write, continued to try to improve his writing to an indefinite degree.

When, however, the writing scales came upon the scene, all sorts of uses began to be made of them. For one thing it was found that writing of quality 12 on the Thorndike scale is as legible as handwriting can be. It is not as pretty as quality 13 and much less so than quality 16 or 17; but if the purpose of handwriting is to be read and if, as was soon admitted, other matters of quality are relatively unimportant, then it really becomes the duty of the school to see that the desired quality is secured and then to make no effort to secure more. Another use that was made of the measuring instruments for handwriting was to find out from people who employed writers and from persons in different walks of life who have writing to do, how meritorious in terms of one of the scales writing should be. It was found that for almost all purposes a quality of 11 on the Thorndike scale or for 60 on the Ayres scale was all that society was demanding. In other words, society does not appear to be requiring writing even of maximum legibility, but is content with somewhat less. Now, if through the instrumentality of the handwriting scale we find that civil service examiners, employers of people to address envelopes by hand, mail-order houses, and people in general in the handling of their personal affairs require no more than a certain specific degree of merit, why should the school be called upon laboriously to develop a greater degree of merit? Why the endless copy-book practice or more recently the equally endless pull and push exercises and rhythmic formation of compact ovals?

Here then we have a project, as the Dalton School calls it, a contract. The pupil with full knowledge of what the various qualities of handwriting are—for he has before him the handwriting scale—contracts to attain a perfectly definite goal, a goal which in respect to quality of handwriting meets every reasonable need. Now, quality 11 on the Thorndike scale is reached some time toward the end of the sixth grade by the average pupil. Unquestionably with this objective definitely in view, the required quality can be secured even earlier in the school course.

At any rate, the standard, we repeat, is like a well-formed habit, reducing effort and releasing energy. In handwriting it permits a pupil to devote additional time to work which is of more value to him than practice in handwriting will be after he has attained the standard. What I have just said offers an illuminating commentary upon the idea that standards formalize education. It turns out that at least one use to which standards can be put is to limit training in the formal subjects and to release time and energy for higher uses.

Just as in the cases of handwriting, so in the case of arithmetic—which is likewise a formal subject—after we have established reliable instruments of measurement we may with some certainty ascertain the degree of skill required to meet the needs of life. I am sure that many schools are continuing to spend time on arithmetic beyond any need which the pupils are likely to have for the subject. Professor Wilson's study comes to mind. He showed that adults have relatively little need for performing operations other than those with whole numbers and fractions of very small denominators. Even within the realm of whole numbers a high degree of skill as manifested by rapid calculation is not ordinarily demanded. An accurate statement of this sort may be made now that we have standards in arithmetic. In terms of the Courtis Standard Arithmetic Tests, Series B, the ability to add twelve examples of nine three-digit figures in eight minutes with 85 percent of accuracy is the average performance of the eighth grade. There is nothing to indicate that the school is justified in attempting to develop greater skill than this in addition. When pupils have met this requirement, they may rightly be expected to devote their time to matters more important than a higher degree of adding ability would be.

On the other hand, there are some lines of school work concerning which our standards do not permit us to assign an upper limit of desirable ability. The standard in reading for elementary school graduates on material of about sixth-grade difficulty is approximately 250 words a minute with an 80 percent accuracy of reproduction. Nevertheless we are justified in attempting to raise these standards. They are points of departure rather than

stopping places. Moreover, there is abundant evidence to show that raising these standards is not difficult. The value of rapid reading is so distinctly an advantage both to the child and to the adult that we cannot, as in the case of handwriting, set a limit beyond which we should not go. If we could teach children to read twice as fast as they now do and at the same time teach them to comprehend their reading better than they now do, we should increase enormously their success in high school and their resourcefulness in life.

I have said that standards, both educational and non-educational, are a natural mode of development. My next point is that the standards we use in education must, if they are valid, be based upon experience. We all have standards derived from our experience, although they may waver and elude definition. The teacher has a standard of some kind when she requires work to be done over, or marks it zero, or indeed marks it anything. The business man has a bull-headed sort of standard when he declares that the schools are not teaching the fundamentals. Various reformers have captious standards when they find fault, each after his kind, with the product of the schools. Probably the most frequent of these indictments runs to the effect that the graduates of our schools—it matters little whether we say elementary, secondary, or college—are quite without ability to think.

It is because the standards of those who thus rely upon their own point of view are unsatisfactory, it is because one person's experience is narrow, vaguely remembered, and inconstantly applied, that the merger of a large number of experiences must somehow take place before we can accept the result as a useful standard.

Accordingly, a standard before it can win our confidence must be based not only upon experience, but upon *organized* experience. It must come out of the lives of a large number of people. It then becomes the voice of many, and as such it is authoritative.

The difference between individual and collective standards is the difference between individual and collective government—between one-man power and power resting upon the will of

many. The school teacher as an autocrat has had too long a reign. Like the absolute monarch in early states and among backward peoples in modern times, the absolute teacher to the extent that he exists today is an anachronism. There are two ways in which improvement has been brought about. One is the conferring upon pupils of greater responsibility for their own behavior. The other is the adoption of standards as rapidly as valid and reliable standards become available.

If, for example, it is authoritatively decided by pooling experience with thousands of children that in oral reading an eighth-grade pupil should be able to read a paragraph of difficulty 8 on Gray's scale in less than 20 seconds, the adoption of this standard means a square deal for everybody. It is far better, let us say, than a standard such as the following: "The eighth-grade pupil should be able to read distinctly and fluently any piece of narrative or didactic prose or verse in his reader." Such a standard, you will readily agree, leaves us almost as badly off as if we were without any guidance at all. For when is reading "distinct," and under what circumstances is it "fluent?" How many errors of pronunciation may be allowed, how many hesitations and insertions? What passage shall be selected from the pupil's reader? How long shall it be? How difficult? For only by chance will the passages in the same reader be of the same difficulty. Textbook writers are in the wildest confusion in their selection of materials for readers of a given grade. If the decision on all these questions is left to the teacher, there will be almost as many decisions, and therefore almost as many standards, as there are teachers.

Let us stop a minute on this matter of variation in individual standards, for it is at this point that one of the most illuminating results of the individualist's notions appears. I take it you will agree with me that the person who today opposes the application of standards in education is distinctly conservative. Now, a conservative doesn't like new ideas. Moreover, he doesn't believe they are true. Against a new idea he has three lines of argument: first, the Bible is against it; second, there is something in it but there is nothing new about it; and third, we have always done it.

Leaving the Biblical line of argument out of account, I wish to show that there is something new about standards and that we have not always been applying them. Consider the textbook writers in the first place. They are, or should be, especially capable along educational lines. I admit that this point is debatable in many instances, but by and large textbook writers are what the statisticians call a highly selected group.

Now let us return to the question of the difficulty of passages in reading books; and let us raise the question of variation in difficulty in this way: "Are the passages which textbook writers put in reading books for a given grade of fairly equal difficulty? In other words, can we, in respect to readers, speak with any definiteness, of second-grade difficultiy or fifth-grade difficulty or seventh-grade difficulty?"

On this point a number of investigators have worked and their conclusions are all to the same effect, namely, that the textbook makers are badly at sea. For example, in examining twenty-two series of readers Hosic found that the story of "The Town Mouse and the Country Mouse" was thought by one author to be suitable for the primer; that three others used it in the first reader; that another used it in the second reader; and that still another used it in the third reader. Again, "The Ginger Bread Boy" was offered in the primer and in the first, the second, and the third reader. Indeed, it was found that no piece which was used by five or more authors was uniformly placed in the same grade. "The common range," says Hosic, "in such cases is four or more grades and some pieces are placed in seven and eight school years." There is no clear concensus among the authors of readers as to the difficulty which various selections may be supposed to present to pupils. Yet those who deprecate the setting up of definite standards would reject a device designed to make possible an agreement as to the difficulty of reading materials. Two or three investigators have devised series of passages of known difficulty. Their work, except that of Doctor Gray in oral reading, has not been competently done and it has, therefore, not been generally accepted. But there is no inherent reason why we should not have a scale for difficulty of reading materials just

as we have a scale for writing, spelling, and arithmetic problems. The method of constructing such a scale is entirely straightforward and the use of it would immensely clarify all our ideas of achievement in reading.

I have offered this bit of evidence concerning the differences among authors of readers, not because I think these men are not keen and alert for all the excellence which they can secure, but because no group of people can avoid differing one from the other as these authors of readers have differed, when, in the absence of standards, they attempt a complex activity. This is one of my answers to the supposed objections of the conservative that "There is nothing new in it," and anyway, "we have always done it."

But I have another answer. If such is the lack of agreement among textbook writers, we may be prepared to believe that the agreement among teachers on these matters would be no greater.

I do not recall any authoritative studies on the judgment of teachers as to the difficulty of reading passages, but their judgment as to the difficulty, the importance, or the value of some other types of school data has been tested and found to be highly unreliable. I wish to remark parenthetically that I am not using the word "teacher" in this connection nor the words "textbook writer" for that matter, with any idea of intimating a special fallibility among a particular class of people. Teachers can judge quite as well as, and no doubt on this class of material far better than, other groups of persons. When, therefore, I speak of the unreliability of teachers' judgments, I do no more than assert the unreliability of unaided human judgment.

We are accustomed to think of arithmetic as a highly objective study. We are likely to suppose that a teacher's judgment as to whether a child has or has not correctly solved a problem will admit of no variation. If, therefore, I establish an undesirable variation among teachers with respect to arithmetical data, I presume you will be quite prepared to believe that somewhat the same degree of variation may safely be asserted with respect to other data.

Not long ago a certain county superintendent selected a paper

which a pupil had written in an arithmetic examination. The paper was on percentage. He mimeographed it and sent it together with the questions to a group of about 100 of his teachers. He asked the teachers to rate the paper. They varied in their ratings all the way from a mark of 10 which one teacher gave it to a mark of 100 which four teachers gave it. Moreover, if 75 had been the passing mark, almost exactly half of the teachers would have failed the pupil who wrote the paper and the other half would have passed him. Evidently it makes a lot of difference in whose hands a pupil falls.

Doctor Ashbaugh in the March issue of the *Journal of Educational Research,* gave similar evidence. Forty-nine seniors and graduate students rated a pupil's arithmetic paper, on which the solution of ten reasoning problems had been attempted. Doctor Ashbaugh had his students rate the paper three different times. For my present purpose, however, I shall consider only the first trial, because in practice a teacher seldom rates a paper more than once. Doctor Ashbaugh reports that the scores of the forty-nine examiners of this paper ranged from 29 to 80. If the passing mark had been 60, about half the examiners would have passed the pupil and the other half would have failed him. There were ten problems in the examination, and six of them appealed to the examiners so differently that some regarded the solutions as perfect while others regarded them as absolutely worthless. For example, of the forty-nine examiners, twenty-one regarded the solution of the eighth problem as perfect, while twenty-one regarded it as worth no credit. Sixteen regarded the solution of the ninth problem as a perfect response, while twenty thought it worthless.

Moreover, besides disagreeing with each other, teachers disagree with themselves. In Doctor Ashbaugh's experiment only one of the forty-nine students, many of whom were teachers, rated the paper the same on the three trials. Only ten of them—that is, only one-fifth of them—agreed with themselves to the extent of giving the same score twice out of three times. Instances such as the following occurred: One examiner rated the paper 55 on the first trial, dropped to 30 on the second, and came back to 40

on the third. Differences of twenty or thirty points on the part of the same rater frequently occurred.

If in a subject as definite as arithmetic, variations such as I have indicated can occur, isn't it time for some sort of standardization to appear upon the scene? Your jealous individualist with his sentimentality and his lack of information merely serves as an obstructionist. To him conformity to anything or anybody is distasteful. He pleads for initiative, and so do I. He wants individuality respected, and so do I. But in the life of today we share many things. We have much in common. There must be common ties to some extent, common ideals, and common purposes. I submit that when a teacher or a curriculum maker or a textbook writer pretends to hew to the line in any particular, he should do the thing he sets out to do. If he rates pupils and ratings are supposed to be uniform, they should be uniform. The standard of uniformity is the standard to apply. If, on the other hand, it is a question of judging the difficulty of material for inclusion in the course of study or in school books, again the standard of uniformity is the standard to apply. A thing is difficult for pupils according to the proportion of them who under given conditions can get it right or in some way react satisfactorily to it. Or, from another point of view, a thing is difficult in proportion to the time it takes under given conditions for typical learners to master it. In either case, difficulty is one thing, and not many. And this one thing—this degree of difficulty—is not subject to your opinion or mine but is susceptible of exact determination.

The point I am trying to make is that as these standards arise out of the organized experience of school children and school teachers, the thing that makes them desirable as standards—the thing in virtue of which alone they are standards—is their uniformity and objectivity.

Now is appears that the only really effective way in which standards may be set up in definite form as this product of organized experience is through numerical processes. Hence, standards of the most usable sort are quantitative. I do not mean that qualitative standards are inferior. I do not mean that

initiative as an objective, or the ability to think, or honesty, or the golden rule are to step down from their high places and make obeisance to the latest numerical index. But I do assert that their lack of precision is not in itself a merit. It affords precisely the same basis of variation and the same uncertainty of application which we have already seen in the case of accuracy in answering arithmetic problems or of difficulty of reading selections. In spite, therefore, of the value of these qualitative standards, I think it may be reasonably maintained that standards are most useful when they are quantitatively expressed. For example, if, merely upon my own experience as a teacher, I assert that eighth-grade pupils should be able to add, my statement is of little value. And even if I summon to my support the experience of many teachers to the same effect, I have still done little toward setting up a useful standard. I have not indicated how accurately such children should be able to add, nor at what rate. Moreover, I have not specified the kind of quantities, nor their size, nor their number. Must the child be able to add fractions as well as whole numbers, denominate numbers as well as decimals? Should he be able to add numbers of one digit or of a dozen? Should he be able to add two numbers or a column as tall as his tablet? The only satisfactory way to arrive at sufficiently definite standards of adding has been by assigning specific tasks to a great many pupils and recording their successes in performing them. From these records, made in numerical form, we deduce for example, the Courtis standard, already mentioned. Typical eighth-grade children can add in eight minutes with 85 percent accuracy, twelve examples each composed of nine three-place numbers.

Observe that the standard I have just quoted is essentially a numerical statement. So also is the statement that graduates of elementary schools should write as well as quality 12 on the Thorndike scale and at the rate of 70 letters per minute. So also is the statement that eighth-grade pupils are able on the average to spell words of the difficulty of Column U on the Ayres Scale with 84 percent of accuracy; that they are able to write a composition of quality 5 on the Hillegas Composition

Scale; and that they are able to read and respond correctly to 12 paragraphs of the Burgess Reading Scale in five minutes. Many such quantitative statements are possible.

And now having paid my respects, I hope sympathetically to the standardizing movement as it is usually conceived—to average performance in school subjects, to reliabilities, variabilities, relationships, and all that—I wish to conclude by pointing out that there are still higher and better standards than these—standards which arise just as surely as they, out of life experiences, standards which are higher and truer than they and valid with a validity which they can never have.

Learning is a tool; and as such it is passive. The three R's possess no righteousness. A man may learn to read, but if he reads degrading and debasing things, he may be worse than illiterate. Writing may make him a forger, and arithmetic, a swindler. Ignorance of these fundamentals is always a misfortune, but knowledge of them may only add to the powers of evil. We evidently need other standards to insure the right use of these abilities. These standards will not be expressed in terms of better or poorer writing, or in more or less of reading or arithmetic. They will be expressed in terms of ideals of social relationships, and of the meaning of life.

The wisdom of the race has decreed that there are certain elementary skills and abilities extending beyond the three R's, but of which they may stand as a type which must be learned by all who can learn them; and it is sheer nonsense for obstructionists to object to any procedure which will permit them to be learned more quickly and by more people. The wisdom of the race has also recognized that beyond these elementary skills which everyone should have are the fields within which we have choice, fields which minister to our special interests and in the pursuit of which we aim at more abundant life. Any plan which will assure a profitable entrance into these fields for increasing numbers of people, deserves general support. This is the function which exact numerical standards now perform.

But in a sense their function is subordinate. Their role is to permit teachers to do well the introductory job of teaching and

to leave them time to devote to ethical and social types of instruction. Character and right living remain, as ever, the real objectives; and the education which merely teaches men to make a living while failing to teach them to live is a low order of activity.

It is, therefore, only as we summon to our aid, standards of the highest order that we become educators in the best sense. Those highest standards, I wish to insist, are of the same normative type as the standards in terms of school achievement. They are, however, more universal, though less exact; and instead of being drawn from science they are drawn from philosophy. They derive their value from what we conceive life to be.

And so it seems to me that in a complete scheme of education we shall envisage a hierarchy of standards rising one above the other, and as they rise, diminishing in precision and increasing in range. The lower orders have received most attention lately and it was essential that this attention should be given them. There was and still is vast waste in teaching things which should be done with precision and dispatch. If we can now say, as Judd has said, that the child of today obtains by the end of the third grade all the rudiments of reading which the child of the mid-nineteenth century obtained in his entire school life, it is largely because men and women have studied these narrow, specific standards and have lifted educational practice toward them. But in their attention to these lower order standards, the best thinkers among them have not failed in their allegiance to the higher standards of teaching and of education as a social agency.

On the other hand, signs are not wanting to indicate that the philosopher and the educator of large vision are beginning to see something in these norms of achievement on which so much effort has lately been expended. From being scornful, many of them have become tolerant and even in some cases well informed. They may well be finding that just as their larger objectives give direction to the more immediate objectives of the classroom, so the latter give content and substance and practicability to the higher objectives. I like to think that from the most concrete to

the most abstract standards we have an unbroken system for appraising our work. In this system each order of standards is supported by the others. The lower orders without the higher are blind; and the higher without the lower are empty.

Among these higher-order standards, the highest, the most potent, the most energizing seems to me to be the level of our thinking in regard to the school itself. I mean its place in society and its significance in civilization. Perhaps you have read H. G. Wells' *Story of a Great Schoolmaster*—the schoolmaster being Sanderson of Oundle. Speaking of this remarkable man, Wells says: "Out of a small country grammar school he created something more suggestive of those great modern teaching centers of which our world stands in need than anything else that has yet been attempted . . . ."

"Before his end he had come to a vision of the school as a center for the complete re-organization of civilized life . . . ."

"In that age of realization every village will be dominated by its school, its library and theater, its laboratories, and gymnasium. Every town will converge its cluster of schools and colleges, its research buildings and the like, and it will have its great chapel, its house of vision as its crown and symbol, even as the cathedral was the crown and symbol of the being and devotion of the mediaeval city."

SUCCESS, PERSONALITY, AND INTELLIGENCE

W. W. Charters
University of Pittsburgh

Mental testing is not a passing fancy; it is a permanent tool of analysis and diagnosis which will grow in power and value. It has already, in less than a decade, altered the complexion of psychological research and revolutionized the treatment of many problems of educational administration and methods of teaching. The publicity it has achieved among laymen has been amazing, and its use in technical educational fields has become universal. It has hewn out a roomy niche for itself in the halls of learning.

But every giant has his limitations. Every principle has its constellation of exceptions. No method has an unlimited field of application, and intelligence testing is no exception to this rule. Yet we find that sometimes careless administrators form special classes for students merely upon the data obtained from mental tests. Intelligence ratings are occasionally placed in the hands of teachers to guide them in giving class grades. Teachers whose class marks do not correlate with the intelligence tests are placed on the defensive. Students with low intelligence quotients are considered hopelessly lost in the school world. In business there are employment officers who accept or reject applicants upon the basis of their ability or inability to reach a critical score. These are a few of the cases which are found in sufficient numbers to give us concern and to raise the question of the limitation of the intelligence tests as a basis for the prediction of success either in school or in life.

Correlation between intelligence rankings and school marks is not high enough to be considered more than prima facie evidence of its existence. The correlation runs from plus 0.40 to plus 0.60, and plus 0.50 is the accepted average. This means merely that there is a slight tendency for bright students to make high grades in class, and it means nothing more. In general, the brighter students make higher grades, but not often enough to give us much confidence in predicting more than that they *ought* to make higher grades. That every student indicated as bright by the intelligence test will do so is never the case in any school. Some of the bright students make lower grades, and some of the less bright ones makes better grades, than would be expected. As a matter of fact, it has been shown that the less bright students make, on the whole, better grades than would naturally be expected, while the bright students make lower grades than they ought, judged by their intelligence scores. Deductions concerning school success which are based merely upon intelligence rankings are open to criticism.

If we turn from the school field to the vocational field and seek to predict success in business from intelligence scores, the case is strikingly hopeless. On numerous occasions it has been

demonstrated that the correlation between intelligence scores and success in business drops below the school correlation of plus 0.50 and hovers around zero. The bright man is no more likely to make a good salesman than is one less bright. The methods of measuring success may be faulty, but it is a peculiar fact as well as a significant one that no matter what the method for measuring success be—be it earning power, judgment of executives, or any other—there is no correlation.

In the face of these facts, it is natural to raise a question as to other possible factors which may influence success in school life. To this question "common sense" gives us some clues. Everybody will tell you that character and personality are factors in success. Executives will volunteer the information that industry—the ability to work hard and steadily—is a potent factor in success. In some occupations social forcefulness and sociability are considered to be very important. The man of the street will tell you that undoubtedly the degree of interest in a vocation often spells the difference between success and failure. These are matters of common knowledge. University folks are inclined to overemphasize intellectual ability as possibly the layman tends to underemphasize it.

Which opinion is more nearly right is no concern of ours at present. The point is that in predicting success we ought to explore the clues provided in the field of personality. It may be that we could better predict success if we canvassed the traits of personality. Difficult as is this task with our present technique, it must be done and the findings must be used to supplement intelligence scores. Indeed a beginning has been made in these respects. At once May's recent study comes to mind. In this significant investigation he ranked 450 Freshman students in the University of Syracuse on the honor point basis, where A carries three points; B, two points; C, one; and D, zero. Then he ranked the students on the basis of intelligence scores, and found that the correlation was plus 0.60, which is about what is usually found, though slightly higher. Then he measured their industry by a somewhat crude, but ingenious method. He computed the average number of hours spent in studying by each student and used

this as a measure of his industry. The data secured from the students had a high degree of reliability.

The correlation between the time spent in study and honor points was plus 0.32 and shows that industry alone measured thus is not as good an index of probable success as is brightness alone. Yet when he combined industry and brightness and correlated this factor with success as measured by honor points, the correlation rose to plus 0.80. Intelligence alone is plus 0.60; industry alone is plus 0.32; intelligence and industry combined is plus 0.80. Thus we see in this typical study what everybody expects—that if the student is both bright and industrious, his chances for making high grades are appreciably increased.

In salesmanship, as one type of business, other traits of personality show interesting correlations, particularly in view of the fact that the correlation of mental alertness with success in selling is approximately zero. We see, for instance, on the basis of the Carnegie adaptations of the Downey character tests, that such a factor as coordination of impulses or the ability to keep two things in mind at once in handling a situation has a correlation of plus 0.68, which is higher than May's correlation of plus 0.32 between the honor points and industry or the correlation of plus 0.60 between honor points and intelligence. Such another factor as "always working at the highest speed" has a correlation of plus 0.46, and these two combined provide us with a correlation of plus 0.76, which is almost as high as May's figures on brightness plus industry in school.

Other cases could be cited if it were necessary to substantiate the opinions of "common sense"—that personality is a major factor in success. Even though the facts are meagre, because as yet there has been no great advance made in the measurement and analysis of the traits of personality, it is confidently to be expected that eventually methods of measurement will be provided and that, when these have been secured, we shall in all probability be able to predict success to a much closer degree than at present. That a perfect prediction can ever be made is not likely. There are too many variable factors. The degree of the trait may vary from year to year. For instance, the lazy boy of sixteen may be

a glutton for work at twenty-three because he is older, is married, or has found an interesting job. The girl whose health is superior on the day of her tests at sixteen may become an invalid before she is eighteen. In the final stages when the technique of trait measurement has been perfected, the prediction cannot be perfect. It will merely be closer than is now possible.

If I have made the idea clear, the audience will have got the point that I wish to make—that mental tests are exceedingly important in measuring mental alertness, but that they have serious limitations as a measure of the total ability of an individual.

If this be true, they must be handled with extreme care so that the students may not suffer. That they do, under carelessly handled conditions, now sometimes suffer is currently known by all. In using intelligence tests, therefore, a few precautions must be taken. These I shall take the time to enumerate since my audience is composed of people who have adopted intelligence tests as a routine implement in the crafts of teaching and administration.

In the first place, information about intelligence scores should be given only with extreme care to the students concerned. There is altogether too much casual discussion of upper and lower quartiles, brightness and dullness, and so on in the presence of the pupils discussed. So frequently as to amount to cruelty a teacher will discuss the student, in his presence, with someone else and speak of him as being slow or dull, or as having a low intelligence quotient, with a complete lack of regard for the feelings of the child. We know from studies which have been made that knowledge of their mental rating causes discouragement on the part of ten percent of the students. Boys and girls have been crushed by the information that they were below the average in mentality. They have given up chosen careers, perhaps unnecessarily, have experienced continued periods of depression, and have lost ambition to succeed.

Such procedure is worse than cruel—it is false and stupid. What right has any person to predict failure because an intelligence quotient is somewhat low? To be sure, three percent of the pupils in the school may be so defective as to be hopeless, but

the other ninety-seven percent may possibly be able to develop compensating traits of personality that far outweigh mediocrity in mental ability. We of the classroom are inclined to feel sorry for the industrious child with a comparatively low mental score, who by dint of hard work keeps abreast of his class. "Isn't it unfortunate," we say, "that he isn't bright?" We should rather seek to say, "Isn't it fortunate that he is so industrious, ambitious, and friendly? What a fine chance he has for success in the game of life where there is no particular correlation between success and brightness." It is high time for all of us to follow the wise observers of men and affairs and to give to personality the credit and place of importance it deserves. In making an inventory of the assets of a man, industry, forcefulness, leadership, sympathy, and ambition are major headings, which combined yield nothing in importance to brains and mental brightness.

Such being the case I repeat that extreme care should be taken in letting children know their mental scores. This care should be both positive and negative. Negatively the scores should be kept from them except where it is extremely necessary to make them known. Positively, they should always be accompanied by a supplementary statement about compensatory traits. Four cases requiring different treatment at once appear. If a student is bright and has fine traits of personality and character, he is likely to be so successful that he will feel comfortable and satisfied with his progress. It is unnecessary for him to be told how bright he is. If he is bright and has some fine traits but lacks confidence to the extent of becoming chronically depressed, it may be necessary to reveal his strong traits in order to establish the necessary confidence. If the student is bright but lacking in the traits of industry and ambition, his intelligence score may be revealed to him, but only with an emphatic statement to the effect that he must develop his weak qualities so as to do what is expected of him. If a student is not bright mentally and learns of the fact, we may be sure that he will be discouraged by the information. So again if it is necessary to let him know his score, or if he inadvertently learns it, the teacher must hasten to explain to him that he has compensating qualities or may develop them, that

success is quite as dependent upon other things as upon brightness, and that it is better to be mediocre in mentality and strong in industry and ambition than to be bright but lazy and shiftless. Too much attention cannot be given to this. Because of the thoughtless remarks of some teachers, children often develop inferiority complexes which they are never able to outgrow. Success is too complexly conditioned to be handled by any formula so simple as mental alertness and intellectual dullness.

In the second place, classes should be only tentatively sectioned upon the basis of intelligence tests. The sections should not be permanent in their composition. Not that the lazy, but superior child should be placed in a lower section when he fails to maintain his ranking; he needs to be kept where he is and the pressure increased. Yet the highly nervous child or the sickly pupil of superior mentality may be benefitted by a change to what we call a lower section. And particularly may the child of great industry and ambition who according to the intelligence ratings belongs in the next lower section, be advanced to a higher section when the teachers feel that he can successfully carry the work because of his industry. The door should not be shut in the face of ambitious youths just because there is a slight question as to their mental level. As I have said, success is far too complexly conditioned to be measured by a formula which involves mentality only.

In the third place, we should have records not only of intelligence quotients and of educational marks, but of personality quotients as well. The school record of a child should contain not only his school grades and his mental score, but his rating as well in certain fundamental traits of personality such as industry, ambition, friendliness, dependability, initiative, self-confidence, and resourcefulness. Only by these means can we hope approximately to predict his performance in succeeding grades or in his later adult life, and only from such data can we derive an index of his personal accomplishments. It may be more significant that a student raise a rating of D in self-confidence to a B than that he be the brightest student in his class. If somewhere along the years of his schooling he suddenly rises in his rating in

ambition, the prosy symbol on his record may mark the dramatic turning point in his life. A low, but improved or gradually improving, grade in initiative may often be a mark of greater progress than a superior grade in intelligence or a grade of "A" in class work. The traits of personality which we often treat so casually in our records need to be brought out into the focus of pedagogical attention and given the position they deserve.

I have seen many bright executives fail because they were irritable and unfriendly, and conversely I have witnessed an immediate rise in efficiency when after effort they began to overcome those faults. I have also seen men of superior intelligence and training completely and despondently fail because of lack of self-confidence, and have again witnessed a consistent and even spectacular rise of these same men when their confidence in themselves was restored. Men and women who have become nervous and irritable because they did not know how to relax, have prolonged their vocational careers and conspicuously increased their happiness by the mere development of the ability to take things easy.

In the presence of all these facts it is self-evident that ideals and traits play a considerable part in all measurements of people. Their's is a supplementary role; they compensate intelligence. Success cannot be predicted with safety by tests of mental alertness alone. Mental and scholastic records must be supplemented by ratings of personality traits. Teachers and demonstrators can use intelligence quotients safely within definite limits; but, again, it must be remembered that *success is too complexly conditioned to be predicted by a single mental formula.*

GENERAL SESSION

FRIDAY, APRIL 4

INFLATION IN EDUCATION

THOMAS CORWIN MENDENHALL

Late Trustee of Ohio State University[1]

Your program committee being entirely responsible for the selection of the speaker but not at all for the character of the speech, I shall be greatly disappointed if there are not many among you who will dissent from me in no very mild fashion regarding some of the conclusions I have reached, and I am quite prepared to have my right to speak upon the subject challenged.

Indeed, I am ready to anticipate this assertion and to confess that it is by no means unreasonable, for, according to the prevailing ideas of what constitutes an education, I must frankly acknowledge that I am not an educated person, and, therefore, not qualified to discuss educational problems. I never earned the "cap and gown," today regarded as the "open sesame," admitting —even though rented for a single day—to the sacred precincts within which only the "intellectuals" are supposed to roam. I am quite serious in calling attention to this fact, as I am willing to give those who will dispute my thesis every advantage at the start.

But I am not going to be too humble in my attitude. I am assuming that one who has been in touch, more or less intimately, with educational work during somewhat more than three quarters of a century, an active participant during most of that period and an interested observer during the remainder, must be dull, indeed, if he has not accumulated at least a few ideas worthy of consideration by a body of people so highly professionalized as this.

It would be a waste of time for me even to enumerate the many fine things that have come during that period, which I hope

[1]Mr. Mendenhall, for many years a Trustee of Ohio State University, died on March 22. This address was read before the Conference by Col. Orton.

and believe have come to stay. While criticism is less agreeable than praise, it is generally more useful. Willing to accept censure, whether deserved or not, I shall endeavor to point out some tendencies of a half century of educational expansion which I believe to be harmful and which I choose to call "inflation." These tendencies I believe to be so harmful, that in the actual attainment of what our goal should be, we have really been courting failure.

Out of such a bald and bold statement, there arises at once the query, "What are we striving to accomplish? What, then, is an education?" The answers are so diversified that one can only furnish one's own, and build one's argument around that. Yet there must be some characteristics, some qualities intrinsically and almost irrevocably attached to the word, concerning which we are essentially in agreement.

There is Huxley's famous pronouncement, delivered as long ago as 1868, at the opening of a workingmen's college in London. Though more than a half century has passed since that day, nothing finer has been said, and it should be brought to the attention of the present generation of schoolmasters. Huxley said:

> That man has had a liberal education, who has been so trained in youth that his body is the ready servant of his will, and does, with ease and pleasure, all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold logic engine, with all its parts of equal strength, and in smooth working order, ready, like a steam engine to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations; and who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of Art, to hate all vileness and to respect others as himself.

With undiminished admiration for this clear and comprehensive interpretation, for my present purpose I prefer the following simple statement: Education is not an accumulation of information, though information, facts and knowledge are necessary collaterals and have much the same relation to education that the fertility of the soil has to the growth of the plant. Education is the training and discipline of what we call the mind or the intellect. The development of this attribute in man is so far above

that of other animals that it has made him the ruler of the world in which he lives.

Since education, like the growth of a plant, cannot be bestowed but must be acquired by continuous development from within rather than by accretion from without, those processes which stimulate this development, which tend to increase the efficiency or insure the more perfect working of this "clear, cold logic engine," must be regarded as its essentials, although they do not necessarily embrace all that is generally included under that term. On the other hand, anything which tends to lessen the efficiency of the intellectual machine, to "soften the intellectual fibre," whatever else it may be is certainly not education; but rather the very anthithesis of it, often, indeed, the parasite which provides for its own existence at the expense of the life of the plant to which it clings.

Having now reached something like an understanding, or at least a tentative agreement as to the principal content of the word education, we may proceed to the justification of the statement that we are in danger of scoring a failure. During many centuries and up to about a half century ago, what was thought to be a liberal education was the result of a combination of three elements, each of which was believed to be essential. These elements were mathematics, language, which included history and literature, and science.

It was generally believed that mind, like muscle, was strengthened and developed by vigorous exercise and these three areas of intellectual activity were thought to be satisfactory from the informational point of view and at the same time to furnish that measure of resistance which, with mind as well as muscle, is absolutely essential to the development of strength. One's biceps are not enlarged by "sawing the air."

The curriculum of the college or university, thus determined, was imitated as far as possible, in principle, in the courses of study adopted by secondary and primary schools; reading and English grammar, arithmetic, and geography, for the science, were the subjects most stressed in primary grades, with liberal extension of these in secondary schools, including often both

the Latin and Greek languages and algebra, geometry and sometimes more advanced mathematics; physical geography, astronomy, chemistry, or natural philosophy. In both college and secondary school it was the practically universal custom to arrange courses of study so that no student was engaged with more than three subjects at one time, and in each there was a lesson every day.

The rapid expansion of our knowledge of the material world, resulting in a multiplication by subdivision of the so-called "natural sciences" created a situation which was met by the introduction of the elective system, under which a student—at first only in college and university—might pick and choose from several courses those which pleased him. The introduction of elective courses constituted an epoch in the history of education, and necessary and valuable as it was, it was the beginning of one phase of inflation in education, which, like inflation in currency, has necessarily resulted in a lowering of values.

The spread of this and other types of inflation is largely due to a quite unintelligent imitation of one educational group by another. The methods, customs, and names of the college are appropriated by the high school, and then, by the grade schools. There is, so to speak, a constantly increasing effort to get one's foot on the next round of the ladder—that is, the next above that on which one really belongs.

Largely, if not entirely due to the rapid growth of wealth in this country, with its accompanying, though less rapid, increase in personal leisure, a continually increasing percentage of those who enter colleges and universities is of those whose major interests are quite foreign to the traditional reasons for seeking a higher education. Although in great danger, the college diploma has not yet lost its meaning and value in the estimation of the great majority of intelligent people, and its possession, rather than the wisdom and discipline supposed to be gained in its acquisition, is the goal of the members of this wealthy group, already too large and steadily growing.

Similar in their relation to the legitimate functions of the college or university, though threatening their perpetuity still

more are those young people who look upon the four or five years intervening between the graduation from a high school or academy and the "settling down to business," as a period to be filled with the "joy of life," and to meet this situation many of our colleges and universities are rather rapidly adjusting themselves. Demands and restrictions, the compliance with which is notably difficult or irksome, are being abandoned, though it is still customary to require at least a certain minimum standing in a minimum of courses to avoid expulsion, a punishment that is usually applied with great reluctance and apparent regret.

These two elements—an exaggerated elective system and the indifferent or incapable student—mutually react in such a way as to foster the development of both. An institution offering a large number of elective courses, some of which will make no great demands upon the industry and ability of the student, will inevitably attract the indifferent. Hesitating to accept the challenge of scholarship in either faculty or student body as a standard for comparing one institution with another, it has come to be generally recognized, among administrative officers as well as with the general public, that relative rank is to be determined by the very simple method of calling the roll. It is a matter of size!

As is well known, in many European institutions, there is distinct recognition of a class of students who do not take university life seriously. Representing wealth and social or official rank, their three or four years of contact with scholastic cloisters are mostly spent in acquiring experience, in "breathing the atmosphere of learning," and in establishing social relationships with each other. It has been more than once suggested that the official recognition of such a group by American institutions is a desideratum, and doubtless it already exists in a covert fashion. The effect of such a group on our standards of higher education will be more serious than in Europe, for there the requirements for admission to the university are far more exacting than with us and as a result the European idler may waste most of his three years of university life and still be ahead, in all the essentials of an education, of his more industrious American brother.

Contributing, for both good and evil, to the principles and

practice of education during the last half century, are a group of men, but little known at the beginning of that period. Fifty years ago there were psychologists, but they were neither interesting nor harmful; now they are both. Interesting because their subject has rather rapidly acquired some of the characteristics of a science, being the classified knowledge of that vague but very real thing, the mind,—that quality, attribute, essence, all of man but his body, that which we call intellect, in which or by which all of our reasoning processes are carried on, and our material existence controlled. Mind is both the means and the end of education, and therefore in the discussion of educational problems the voice of the psychologist should be authoritative.

Today psychologists are dangerous because, though psychology may fairly be called a science, it is far from being an exact science. In the minds of many of its exponents, it has already reached that stage, and through the ignorant exploitation of that idea, the science itself is in danger of falling into ill-repute. For its rapid development during the last half century, it is entirely indebted to the adoption of the methods of the experimental physical sciences, but it has failed in not checking its conclusions by the rigorous processes and tests which chemists, physicists, and astronomers habitually make use of. Unhappily the great difficulty in discovering and applying such tests and checks, together with the sensational character of much of its work, has made it a favorite resort of charlatans and imposters, who are not generally recognized as such by an undiscriminating public.

While admitting the great value of psychological research in education, I deny certain conclusions which the psychologists seem to have reached, especially one announced some years ago, which as I understand it, peremptorily affirms the non-existence of what we have long believed in and struggled for, generally known as "mental discipline." I deny this conclusion with all the confidence of one who knows nothing about how it has been reached, but I do so because it is directly contrary to observation and experience extending over many years.

According to this doctrine as originally presented, the human mind works in grooves or along single tracks, with no facilities

for switching from one to the other. It means that if one had pursued an intensive course of study in any single field of intellectual activity, the exercise and development and strengthening of one's reasoning powers resulting therefrom would count for nothing if applied to another field. The severe logic of geometry, the capacity for generalization acquired in the study of algebra, the skill in devising and applying tests and checks attained by the physicist or chemist, all of these are useless to one who "majors" in history or political science. The theory that the intellectual blade can cut nothing except that from which it has acquired its edge seems utterly without support, except—and I suggest this with much fear and trembling—the evidence which the psychologists in themselves furnish.

The influence of this theory in producing inflation has been great. It has led to extensive additions on the one hand and to a few regrettable exclusions from standard courses of study on the other, and it has contributed largely to the acute specialization of many of the courses offered to undergraduates of colleges and universities. The negation of intellectual discipline has resulted disastrously also in secondary education. The extreme modernist in education rejects the idea of value in doing a thing merely for the sake of doing it and for the pleasure that one may find in proving that it can be done. He sees little or no value in attacking difficult problems; whether one should cut or spend five minutes untying a troublesome knot depends entirely on the value of the string. He seems to have no conception of the joy of victory over opposing forces and conditions. On the other hand, he is an active propagandist for the removal of obstacles from the pathway of the student, or hiding them where they cannot be removed. It is only in the field of sports that obstacles are purposely introduced, and whatever I may have to say in criticism of the administration of school and college athletics, I wish, at this point, to say as emphatically as I can that those who direct them are, in their knowledge of sound theory and effective practice of the principles of pedagogy, far ahead of the majority of their colleagues whose teaching is done mostly from the lecture

platform. Games are won by those who have learned to play by *playing*.

A sort of by-product of this result of recent psycho-pedagogical research is the theory that all intellectual exercises for the young should be made agreeable and pleasing to them.

There must be enough inflation of the school or college program to insure a group of topics for each pupil which will not tax his mind beyond the point where the exercise ceases to be interesting or amusing. Naturally pedagogy of this kind is for the moment very popular with the majority of young people. Teachers and superintendents who strive to achieve personal momentary popularity, college professors and deans who imagine that their success is measured by the number of pupils who seek their courses, are easy converts to the doctrine that young people must be allowed, during the educational period of fifteen or eighteen years, absolute freedom of choice as to what they will do. The principal of one of the leading high schools in the country has declared that a pupil should be allowed to "try" any course that attracted him and to drop it for another at any moment, if it did not interest him sufficiently. I like to quote the pronouncement of a member of that large and important group known as "distinguished educators" at a meeting of the National Educational Association a few years ago, which was that "to compel a young girl to study algebra against her desire was to imperil her soul," and I would like to suggest to the directors of our numerous Bureaus of Educational Research that a statistical examination of this subject would be of great interest. How many souls have been actually lost in this way, have any of them ever been recovered, and by what process?

Devices for smoothing, or rather avoiding the rough places on that road which for thousands of years has been assumed to be the same for prince and pauper are extremely numerous. It is, indeed, on the informational side, by far the least important, that all of these short and easy paths to learning are discovered, forgetting that the basic problem of acquiring information was solved long ago by that greatest of all human inventions, the alphabet.

But reading involves some labor, and the acquisition of information in that way is not entirely free from the necessity for intellectual effort. This is now to be avoided by the use of what is called visual instruction. It is proposed to teach by an extensive use of pictures, and no one would for a moment condemn the proper use of pictorial illustrations in conveying information; but, I repeat, information is only a minor element in education, the major element of which is subjective and not objective. Passing lantern slides and turning the crank of a moving picture machine is not a difficult task, and if proper attention has been given to the upholstering of the seats so that the physical comfort of the boys and girls is insured, visual instruction is likely to meet with their cordial approval. There is much potential value in this sort of work, however, and I would be glad to see facilities for doing it provided in every school where there is a teacher who has the courage to control their use.

Another comparatively recent method of relieving the pupil of the pain of intellectual effort is the "supervised study" which, in the hands of nine out of every ten teachers, is bound to be harmful. A few weeks ago I happened to ask a ten-year-old pupil in the junior high school attached to the School of Pedagogy of one of our foremost universities, how he arrived at a certain result. "The teacher showed us how," was his answer. It is vastly easier for the teacher to "show him how" than to induce him to find the way himself.

As an inflation in the same direction the "social recitation" should not be forgotten. An occasional diversion of this sort may not only be harmless, but, in certain respects quite foreign to the real object of the recitation, it may be beneficial. Danger lies in the excessive use of methods which have only the merit of being "interesting and easy" for all parties concerned.

A half century ago the door of the schoolroom constituted a very well-defined partition between play and work. Today play has crossed the threshold and is driving work out of the door and off the grounds. "Make it interesting and easy" is the slogan, and the result is too often a thin veneer of knowledge, a base counterfeit of that to which the victim has a right to aspire,

though unhappily he knows not the difference. Because of this there is developed at an early stage a dread on the part of the pupil of anything in the way of a test which reveals the emptiness of the shell, but he is quite enthusiastic over the recently exploited method of examination which consists in asking only such questions as can be answered by yes or no. The greater the number of questions the better his chances for having at least 50 percent to his credit, and it may fortunately happen that there will be a few of them of which he actually knows whether he should write yes or no.

So much for the pupil—what of the teacher under this system? Mark Twain has said, somewhere, that "every man expects to live at least another year." Being quite of that mind myself, I am still willing to tempt fate by asserting that the modern normal school of this and other states, though successful in the estimation of many, is in truth an unhappy failure since it ignores that most important element in the make-up of a teacher, namely, a knowledge of the subject which he is to teach.

Young and immature graduates of high schools, in which there is little if any insistence on scholarship, are admitted to the normal school and immediately enter upon the study of methods as developed in such courses as: administration of vocational education, literature in the primary grades, methods in geography and elementary sciences, elementary psychology, principles of education, history of education, child psychology, story telling, corrective physical training, and a host of others from which a choice may be made of such as promise to furnish the easiest way to the certificate of a year's work in a normal school, which is now required by law in Ohio before one may become a teacher.

This emphasis upon "methods," which follows the teacher through all of his courses at the normal school and embarrasses him, if he be a real teacher, throughout his whole professional life, is one of the most damaging results of our all-too-successful efforts to "standardize" education.

A few years ago a young man whose graduation at one of the leading eastern universities had been supplemented by study in

Europe, accepted a position as instructor in physics in one of the older of the midwest universities. Both at home and abroad he had sat at the feet of great scholars and he began his life's work highly charged with the "divine afflatus" of real learning. Though entirely lacking in training in or knowledge of the principles of education, he was an inspiration to his pupils who attacked their somewhat difficult subject with great enthusiasm. One day he noted that there was seated in the back row a rather solemn but inoffensive looking individual who had not responded to the roll call and who seemed to be immune to any and all interest in the subject under discussion. His attendance being repeated for several days in succession the instructor ventured to inquire why he was there. "I belong to the Department of Pedagogy," he said, "and I am studying your method." To which the young physicist, astonished and doubtless somewhat affrighted, replied, rather explosively, "My God, man, if you find I have one, let me know!" A method was the one thing he neither needed nor wanted. At this moment he is the head professor of physics in one of the foremost of the eastern universities and a scholar of international reputation. It would be interesting to know where and what he would be now had he been thoroughly disciplined in the most approved methods of presenting his subject and "managing" his class.

A dozen good teachers will have a dozen different methods and each will have an indefinite number of variations of his method, so that it may adapt itself to the individuality of each pupil. A teacher may well study different methods, but he should be left absolutely free to choose or to create his own. For results only should he be held responsible.

In judging results one cannot overlook the factor of the individual ability of students. The success of a student in meeting what should be the requirements of high school, college, and university is determined by the product of desire and capacity, the absence of either of which results in failure. In this presence, I need waste no time in quoting authorities to show that among young people there is a very wide range of capacity for successful intellectual effort. From those on the fringe of the sub-

normal to the highly endowed is indeed a wide gap, and lawmakers should learn that legislation will no more make men wise than it will make them good. Every high school is handicapped by the presence of the incapable, often though not always there against their own will, and the same is true of colleges and universities, to many of which—in some cases compelled by legislation—graduates of high schools are admitted without examination or test of any kind.

It is this sort of inflation that is largely responsible for the rapid expansion of the curriculum, the introduction of the so-called "practical courses" and other devices by means of which both the incapable and the indifferent may be carried along. Indeed a high authority in matters educational has publicly declared that the standards of scholarship of our colleges and universities must be lowered "in order to meet the demands of mediocrity."

Evidently we are confronted by the question, shall state supported education be a levelling down process or a lifting up? If the latter, the state must devote its best efforts to the production of superior people, I mean the comparatively few who are superior to the many, for they and they only can raise the level of that stratum which we know as mediocrity, and correspondingly that of the whole race. We are so constituted that we must either go forward or backward, and the backward urge is usually the strongest.

Among the more generous contributors to inflation in education, both secondary and higher, is that group of varied interests known as "student activities," so well known to every one engaged in educational work. Of comparatively recent origin, they have grown with a startling rapidity and it is no exaggeration to say that they absorb the major part of the energy of a large number of students.

Although they serve an admirable purpose when functioning within reasonable limits, they easily become a menace to the legitimate and orderly operation of the school or college when uncontrolled, and the difficulty of control seems to increase at a higher rate than the increase in numbers. Unfortunately, many

of these "activities" are not restricted to halls, colleges, or campus limits. To display acquired accomplishments long journeys are taken, often requiring the absence from regular work of hundreds of students during several days or even weeks.

The demoralization resulting from the gross exaggeration of this phase of college and university life is generally recognized and deplored, affecting, as it does, not only those who are actually engaged in the numerous diversions which tempt the student, but all others, faculty and instructors not being exempt. No other phase of extra-curricular student activities will compare in rapidity of growth, magnitude of development, and resulting demoralization of the entire academic body with intercollegiate athletic sports. Here, as nowhere else, the general public exerts an influence upon educational administrators which they seem powerless to resist.

It is a severe reflection on the work of great institutions of learning, one which should cause thought on the part of trustees and faculties, that with very large numbers of the alumni the only tie that binds them to their alma mater is woven out of athletic contests and victories. It is for these that they return to the campus in great numbers and it is over these that their shouts of loyalty are heard. Naturally this spirit is caught by the student body and carefully fostered by those especially interested in the athletic organization.

The stupendous structure which has developed out of these conditions really originated in a very wise and sound emphasis which has been placed by school men upon the value of students of good physical health. I know I am challenging severe criticism when I say that in our usual fashion of going too far when we once start, we have converted the classical doctrine, *Mens sana in corpore sano* into a hobby which many of us are inclined to ride in the wrong direction. We are placing the emphasis upon the sound body instead of the sound mind, which is of infinitely greater importance to us, not only individually, but to the race as a whole.

"Above all things get health" is continually preached to the young, instead of "Above all things get wisdom." Get both if

possible, but the contrast of a sound mind in a weak body with a sound, healthy, vigorous body directed by a weak mind needs no comment. It is a mistake to assume that a sound body is absolutely essential to great deeds. The weaklings have done their share. I am not arguing in favor of ill health, but reminding you that brain, not brawn, has been, is now, and will continue to be essential for the things that are most worth doing.

It is the duty of every institution of learning to provide for the proper physical training of its students, to the end that health may be conserved during the period of their scholastic life and a bodily vigor may support the "cold, clear logic engine" during these years of intensive activity, but it seems quite obvious that the current form of athletic hysteria is not a necessary feature of such training. I am not concerned with the effect of this hysteria upon the small group of those who are mainly responsible for bringing it about, but rather with the influence upon the tens of thousands of young men and young women who are drawn into it and whose standards and ideals are greatly debased thereby.

As a contrast to the rewards which await the victors in intercollegiate sports, I am tempted to refer to the plan which has been adopted at the Ohio State University for selecting and honoring once in five years, the alumnus who has made the most important contribution to the welfare of the race. It was certainly no ordinary distinction to be the first one chosen for this honor among the twelve thousand alumni, yet the interest of the student body in the award was but slight, and it is safe to say that the name of this man is hardly known to the majority of young people on the campus, who could on the other hand tell in considerable detail the life history of the leading football star.

Finally, there is a problem in education bigger, and much more important than any I have referred to, though closely bound up with them as to origin and final solution. It has come to pass that upon schools, colleges, and universities has been thrown the responsibility of creating, developing, and maintaining the moral qualities of our young people, without which there can be little hope for the future. During the last two decades innumerable mechanical inventions, harmless and useful of themselves but

somehow gone wrong in use, have influenced life in most complicated and fundamental ways. The industrial civilization which has been evolved has disorganized and to a large extent destroyed home life in America; and it was in the home that the seeds of moral conscience were planted and reared a generation ago.

We have become a pleasure-loving and pleasure-seeking people, devoting our working hours to the acquisition of the means for indulging in greater and more luxurious pleasures. Parents have no time for the serious consideration of ethical problems with their children, and children whose major interest is also pleasure seeking, offer few opportunities for such conferences.

It is to schools and colleges then, that we must look for help in the solution of this problem, by far the most difficult with which they are confronted at this moment.

Recent investigations to ascertain the existing standards of ethics among high-school pupils in two communities, usually assumed to be the most intelligent in the country, reveal a condition quite worthy the attention of a body like this. In one of these communities the following code met the approval of over 60 percent of the large group from which information was obtained: "If a store-keeper gives you too much change it is all right to keep it; he probably would do the same thing if you were the store-keeper." "It is not the duty of the pupil to call the teacher's attention to the fact that he was given too high grades." "Unnecessary failure to keep appointments is not wrong." "It is all right to steal from another who has the money."

The other investigation revealed an even more startling list of replies, which met with the endorsement of a large percentage of the several thousand young people with whom it originated.

There can be no doubt that cheating in one form or another at examinations in schools and colleges for the purpose of achieving a "passing mark" is far more common than is apparent, for many phases of it are practically impossible to detect. Unhappily it is often accompanied by what is generally, though erroneously, thought to be a lesser vice, namely lying. A student is caught cheating at an examination; accused, he vigorously

denies the charge, though the evidence is unimpeachable. This is a gross offense and should receive severe punishment, but under many circumstances we may and do condone the offense, attaching to it a comparatively mild punishment, wholly inadequate, and therefore having not the slightest preventive influence upon others. This is especially likely to happen when the offender is an important member of a hitherto successful athletic organization, to which, however, he may shortly return; and we may soon see him carried from a victorious field on the shoulders of his mates, every one of whom is perfectly aware of his moral delinquency.

The most powerfully protective of all virtues is truthfulness. The boy who has acquired the habit of speaking the simple, unbiased and unrestricted truth on all occasions will never go far astray, and will never find himself entangled in the meshes of denial and prevarication which bind him tighter the more he struggles to escape. Had a number of men filling exalted stations in our National Government had the same appreciation for this principle which they doubtless have at this moment, we might now be spared the spectacle which is attracting the attention of the entire civilized world.

This, then, leaders in education in Ohio, is your greatest problem and if you and those you lead are the unselfish, altruistic group of American citizens which you often declare yourselves to be, you will attack it with your best energies and your best brains, abandoning, for the present at least, movements which many of you think exceed all others in interest, such, for example as thrusting yourselves into the political quagmire through the creation of a Department of Education in our National Government with a Secretary in the President's Cabinet, a calamity which a great many of the most experienced and most valuable members of your body are earnestly hoping may be avoided.

Do not put me down as a pessimist. On the contrary, I claim to be an optimist of the right sort. Your true optimist is one who is quick to recognize the existence of evil, who has the courage to proclaim it and at the same time stoutly resolves to do his best to destroy it.

Note by Editor: In the foregoing paper, especially the latter portion, Dr. Mendenhall was literally writing against time. He felt himself in the grip of an ailment which he recognized made his future most precarious. Many of the pages were written while suffering great pain. In spite of the increasing severity of his attack, he strove valiantly to give expression to his views in this parting message, the product of sixty years of observation, experience and reflection.

His strength sufficed only to give the above searching indictment of the evils which have crept into the educational system. He was not permitted to suggest the remedies. That we may assume he had remedies to suggest in addition to those plainly involved by implication in his paper, the last sentence he was able to force his trembling fingers to write bears eloquent and dramatic testimony. These words are given in the last paragraph.

Dr. Thompson: It is hardly necessary to introduce Mr. McAndrew. His services to the children of the City of New York and his defence of them is well known. His series, of constructive articles which have been appearing in the *World's Work* are likewise well known. I have the honor, fellow citizens of introducing William McAndrew, superintendent of the Chicago schools.

FORGOTTEN FUNDAMENTALS

William McAndrew
Superintendent of Schools, Chicago

Fellow Citizens:

The chairman tells me that Messrs. Buckingham and Charters kept you last night until a quarter to eleven. In our town they have just organized a Calvin Coolidge Club for the Promotion of Humanity Towards Audiences.

The subject announced for a brief, and on your part voluntary consideration is "Forgotten Fundamentals." Henry Churchill, who recently caused his children to be sent to private schools, has begun protesting against being taxed twice: the tuition that he pays in the academy and the taxes he pays for public-school

education. Henry Churchill has forgotten an American fundamental, if he ever knew it. There are some patrons of church schools who are making the same protest against double payment for education. They are forgetting American fundamentals.

In the schools which I attended and in schools attended by some of the more mature and intelligent members of this audience, the idea was cultivated that the school was for us. We also early got the idea not only that the schools were for the children who attended there, but that there were in our town certain property owners that called themselves taxpayers, and for that reason had or ought to have the largest voice in the settlement and the management of the schools.

When a committee went before the New York Legislature to secure certain improvements in public-school service, one of the opponents said regarding the three delegates, "I would like to inquire how many of them have children in the public schools." As one of them was a maiden lady, the second a bachelor, and the third a childless husband, the effect of the question was disconcerting. It seemed to lessen the value of the argument presented by these three citizens for the improvement of public schools, but such objection is absurd.

If they were a committee in charge of the management of an insane asylum, the protest that none of them had children in the institution whose improvement they were urging would fall flat. If those three persons had advocated, because they were members of a prison board, improvement in the management, the objection that they had no right to speak because they had no children in jail would be foolish and stupid. The asylum, the jail, and the public school are maintained not for the benefit of the inmates, but for the public, not the private, good.

When you come to these committees of citizens calling themselves taxpayers, with whom school boards are so familiar, a little Ohio analysis of their situation is not out of place. They come owning property and stressing the fact that they are payers. But in their town there is not a living person who earns a cent or who spends a cent, but who is as much a taxpayer as they are. You can demonstrate it in a schoolroom by the dramatic method.

Let one boy represent the ordinary citizen; let the second boy represent a storekeeper; let the third boy represent the owner of the store. Let boy number one come in and put down his 100 slips of paper to buy his goods, each slip representing a dollar. Notice what happens to it. The storekeeper takes it and pays his rent. What papers is he paying his rent with? With the money that was contributed by the purchaser. He pays his rent to whom? To the property owner. Watch the owner pay the tax. Notice where it came from. There is not one person in your town who spends a cent or who earns a cent, but who is a taxpayer, one who, whether he has children or not, whether he owns property or not, is entitled to have an equal voice with every other person in the decision of questions affecting the management of the public schools. Those are American fundamentals, forgotten day by day in some of our otherwise intelligent communities.

A school superintendent recently elected in one of the large systems, in which there were a number of assistant superintendents organized as a board, was asked by one of the members of the school committee before the vote was cast, "If we elect you, will you be the board of superintendents' superintendent, or will you be the board of education's superintendent?" The candidate replied, "If elected, I will be the children's superintendent" —a remark which brought a merited applause. But when you come to look into it more deeply, should he be a children's superintendent? Should he adhere to that ancient fallacy that education in the United States should be concerned only with children, that education should stop at fourteen, at eighteen, or at twenty-one, or at eighty, when all of your experiences and observation shows that it is the duty of the American public to continue its education to all its citizens at all ages and at all possible times?

Whence arose the idea that public school is only for the children? It certainly cannot be based on any logical deduction from the source of support of the schools for their funds are not children's payments nor parents' contributions. Ask in any one of your classes, "John, who is paying for your education?"

John's answer will probably be, "My father." But is he? When you come to look at the amount of tax for schools that John's father is paying, it is not 1/10, 1/20, maybe not 1/100 of what it is costing the community to educate John. Who is paying the rest of the cost of John's education? It is being paid by everybody who spends money in that town, by unmarried women, by bachelors, by childless couples, by everyone. On this basis the school is not for John; it is for persons who are paying for it; for everybody in that community, that is, the community itself. Once America knew that. In Ohio, in Michigan, in every western state which made education a tax upon all the people, the proposition to do it was met by opposition. Those who secured the passing of the laws for free schools at that time made the argument, made the promise, that these schools will not be for the children or for the parents, but they will be for the benefit of the entire state.

I am almost near enough to the old time to recall the argument, historical and important, in the State of Pennsylvania, when the great fight was made in 1837 on the question as to whether education should be free for all or not. You may recall that the Senate of Pennsylvania voted down the free-school proposition. The speeches were on this line: "We are not going to pass a law which will compel Brown to pay for the education of Smith's children. It is unconstitutional. It is confiscation. It is compulsory benevolence from Brown." Down to defeat went the bill in the Senate.

The word went around, "Let's go down to the House. Thad Stevens is arguing for the bill." Down went the Senators. The House was crowded. People were seated on the window sills. There Thaddeus Stevens was defending free education, "We are not to tax Brown for the benefit of Smith or for Smith's children, but we are to tax Brown and Smith for the welfare and preservation of the American State in accordance with the promise of those who founded it." Such was the eloquence of the fiery Stevens that the free-school bill passed. The Senators at once returned to their meeting place, reconvened, and passed the free-school law.

Webster's argument in Massachusetts was the same. De Witt Clinton's was the same: that the schools are not for the parents, the schools are not for the children, but the schools are to preserve the American Republic. When they quoted the founders of the Republic in support of this theory, they were giving what was the original American fundamental basis for public schools.

In the language of Adams, "We must, if we are to continue the nation, educate succeeding generations to their moral and civil duties as men and as citizens." Monroe, Madison, and Jefferson in almost the same words supported public education, while Franklin said, "It is our duty insomuch as our preservation depends on public opinion, to establish a system whereby public opinion shall be enlightened." It was Washington in his farewell address who argued that "We must promote as of primary—not secondary—as of primary importance the diffusion of knowledge. that we, a nation which is to govern itself, may be trained in the art of government."

Now notice, none of these persons responsible for our public-school system urged taxation of all the public in order to cultivate what the previous address has urged, "a clear thinking logical engine." None of the persons who urged making education a public concern were aiming at any of the familiar definitions of education—some referred to in the paper this evening, others learned by you in departments of education, in normal schools: *"Mens sana in corpora sano,"* or "developing the whole man," or "acquainting the child with his environments," or any of the stock definitions of education. These men were not educators. They were statesmen. The establishment of public education was a government affair, and its purpose was the same as the American government expressed in the language of all its advocates, "to preserve the ideals of the Republic."

Now, what are the ideals of this Republic? In other words, what are the fundamentals of American public education? If you ask the ordinary citizen or the ordinary teacher, so prone have we been to forget, we will say, "the fundamentals are reading, writing, and arithmetic." But reading may only fit thousands of our people to spend their time in consuming the filth and the

crime put upon the breakfast table in print every morning. Writing may fit some of the most brilliant graduates of our elementary schools, skilled with a pen to become expert forgers. Arithmetic may prepare sharpers and swindlers who excel in the practice of arithmetic taught them in the public schools.

It is absurd to say that reading and writing and arithmetic are the fundamentals. They are tools for the accomplishment of some great ideal which is fundamental. What the fundamentals are, you can recite by heart, because you have learned them when you learned the statement of the founders of the country as to why they established here these United States of America. For the first time in the history of any nation, they started with a Declaration of Principles. "Why are we to have an independent government?" For this reason: "Because we believe that man has certain rights and duties to preserve which he should organize as a government." They stated what they were: equality, life, liberty, happiness. After a few years of experimenting with these ideals they repaired their form of government and gave us a Constitution. But before making it, again they repeated what the American ideals were, including those above mentioned and adding union, justice, domestic tranquility, common defence, and general welfare.

These nine are the fundamental ideals of the American Union. The men who founded the nation declared that to keep it alive we must have a system of public education. Therefore, the object of the public school supported by the taxation of all the people is the same as the object of the Government, to-wit: equality, life, liberty, happiness, union, justice, tranquility, defence, and welfare.

Now, how far have we succeeded, without directing our attention specifically towards these fundamentals, in realizing them in the American educational system?

Equality: Pretty well, I think. Don't you? Can you name any place where a boy or girl, a parent, man or woman, is more likely to receive consideration independent of his birth or position than in a public school? Can you? I cannot. It seems to me that inequality in the public schools is continuing to disappear

for I don't see so many teachers' pets in the schools I go into. They used to be there a-plenty before you were born. I was one of them. But equality in the public schools, especially in the lower grades, is evident.

There are those of us who think we see traces of the old inequalities inherited from Europe in the higher reaches of our educational institutions. I noticed it here tonight. The genial gentleman who introduced me referred to me as "Doctor." Why? He did not call you "Doctors." He did not say, "Doctors, I now introduce Doctor so and so." Now, what is this idea which ascribes to persons who happen to have gone a little longer in their educational service than others, this title of distinction?

The Fathers did not want it. Remember they fixed it so you could not get a title unless you had a special act of congress passed permitting you to take one. Yet all over the country there still persist some institutions that say to you, "If you will come here and behave for four years, we will let you add A.B., B.S., D.F., MUS.D. to your name. If you stay longer or do something, you can have a title at both ends of you. You can, as was done here tonight, be called Doctor."

Now, tell me, for though I am not young, I am innocent, tell me what is the difference in the desire to be called "Doctor" Arps, and the appetite to be called "Sir George" Arps? What is the difference in gratifying a man by calling him "Doctor" Arps from tickling him by styling him "Lord" Arps or "Duke" Arps or "Count" Arps? Or by giving any of these titles of distinction which our fathers certainly expected to disappear. They thought they belonged with the gew-gaws of the ancient monarchs, and they put them aside.

You know when a man would come to the capitol in the old days with the sign that he was a Knight of the Garter, they would say to him, "Put it on the inside where it belongs. We don't wear them in sight." We banished the ermine, the sceptre, and the crown. You cannot tell by his clothes the difference between Cal Coolidge and Mr. Arps when you see them together, because there is no costume of distinction in the United States.

But in my dear old Alma Grand Mater, when June comes, all

of a sudden you see a blossoming out of academic regalia that makes you think the Knights of the Mystic Shrine have broken loose on the campus. Great robes lined with blue and yellow, a contraption on the head that is like nothing in the Heavens above nor the waters under earth, with a yellow tassel hanging down in front. Here this procession comes across the campus as if to say, "Look at us, we are educated, you are not." "Distinction!" "We are wearing it. We represent the educated portion of the country, the leaders." But the good thing about it is that more and more of them are beginning to realize that when they have it on they look like guys. And they make one think of a certain animal which the owner could not get to advance without dangling a wisp of straw in front of his eyes.

We are getting rid of that sort of thing in the public schools —the prizes and the distinctions and the honors. In our school we were listed every week: head boy, tail boy, and the word sent back home.

In the high school that I went to, the boy that got the highest mark from the course of the term was given a title called "valedictorian." He was then allowed the never appreciated privilege on his part of standing up graduation night and reciting the teacher's oration to the audience.

Those things denoted a forgetting of fundamentals: the American fundamental of doing away with artificial distinction and approaching more nearly the quality of one big human family. If it is advanced by that sort of thing, do it. If it is not advanced by that sort of thing, consider whether it is necessary in American public schools today that you do it simply because in Dayton, Ohio, the graduates "look so lovely in their caps and gowns."

The next thing which our fathers aimed our schools to give us, because the nation itself was established for it, was life, a full life, and in this it seems the schools have advanced most creditably. More literature, more art, more music, more of the various things that make life worth living are coming into schools. I have not been able to see the evidences of mental flabbiness which are so often ascribed to our present school boy as compared to the

school boy of fifty years ago. The boys in the high schools, the girls, that I see today hold their own with the boys and girls that attended high school when I was there—our town was said to be one of the best school towns in the country. Whenever anyone digs up some old examination test of fifty years ago and gives it to these degenerate boys and girls of today, he finds the scores higher than they were in the boasted times when mental discipline transferred itself from the ablative absolute to every other subject under the sun.

Our Fathers established this nation for the purpose of liberty, and they knew what they meant. It was not Bolshevist liberty. It was not the liberty proclaimed from the soap box. I know this and you know it, because they described it. It was that liberty which consisted in my giving up my own individual pleasures and preferences for the benefit of the whole. It was that liberty which was established in the cabin of the Mayflower before they landed in order that we might band ourselves by law and by order. It was that liberty which Washington said never was license, the liberty to defend which, he carried his sword a second time for the purpose of preventing other people the liberty of manufacturing whiskey without limit. American liberty—always associated with law, always with union, with order. That American liberty flourishes in our schools today.

My principal told me, "I want immediate and unquestioning obedience, and that is what you are to give when you come here." I heard a principal yesterday discussing with a high school the question as to what was the proper conduct of that school with regard to the care of a strip of ground in front of it recently seeded for grasses. My principal would not have discussed with us. But yesterday from this boy and that one and the other came the idea, "That is our grass, and it is our business to see that it has a chance to grow." Before they were through, they had passed a law with regard to the care of that grass. There was not immediate, unquestioning obedience, but there was about ten times a more valuable obedience, namely, questioning, and then a decision.

Happiness: One of the purposes of this country! Fads and

frills, bless them, they have made the school a happy place. Not the sound of weeping and the noise of the birch, which was the old sign that you were coming to a schoolhouse, but a place now of laughter and enjoyment. When our first paper this evening attacked the idea of making things interesting and easy, I felt that if the estimable gentleman were still living and here, I would like to say to him, "possibly you exaggerate." I have never heard and you have never heard of people insisting that the school work should be debilitatingly easy. They do not. They have insisted that it should be interesting. It is by the means of an interesting, happy pursuit of knowledge that the idea can get into minds and stick there, where otherwise if forced in from the outside, with the theory that you must overcome an inner resistance, it did not stay. The minute your course was done, what did you do fifty years ago? You went out and burned your geometry or calculus with a wild ceremony of delight. You burned your mathematics, your physics, showing that the subject was a thing to be hated and not to be loved.

The idea of the modern school is the promotion of happiness of mankind in school by doing work happily and cheerfully and with interest.

When you come to the matters of a more perfect union, this State of Ohio and its neighboring State of Indiana are moving forward by leaps and bounds in the education of their children, in team work, in learning how to work together in a community. School after school with its organization of cooperative government, cooperative management, children and teachers, is working to secure the best interest of its community.

Last week I was in a little one-room school where they are organized as a city. The teacher said, "Would you like to see our Commissioner of Parks?" I answered, "Indeed I would." She said, "Park Department, come forward." The Park Department was about four feet tall. She came up. I said, "Where is your park?" She answered, "I will bring it to you." She went over to the window sill and brought a pot of beautiful blossoming geranium. She is the superintendent of it for community service, a perfect union.

The Street Cleaning Department walks down the six streets of that schoolroom between the desks and sees that the streets are cleaned. All those things that you and I as teachers used to do after school rather than demean ourselves by asking the favor of the taxpayers' children to help us are done now by youthful city organizations in schoolrooms, because it is their room, it is their community, not their teacher's. The fun of bothering teacher by throwing paper on the floor has disappeared, because it is not the teacher's floor. It is "our floor," and "I am a citizen of this community." In that way we are getting a more perfect union in our schools and in our country.

Domestic tranquility: You need it in southern Ohio. But in many schools we are teaching the children that toleration of people of different religious beliefs and colors and racial origins is a duty of the American citizen, in order that domestic tranquility and not domestic strife may obtain.

When you come to defense, what is the record? Where can there be one more glorious than that of the American school? In the war of '61, in the war of 1914, whole universities were emptied, upper classes of high schools disbanded by the passing out of the very flower of our Union for the national defense.

The last objective, the biggest fundamental of all, which sums up the other eight, was put into words by the founders in this form "for the general welfare." Here is where the big Revolution was supposed to have come in the public schools, "For the general welfare." We had schools here. They had been imported from England like our Chippendale furniture and other luxuries. They were foreign importations and their purpose was the advancement of the boy or girl for themselves. That is where this notion still comes from, that the school is for the children. You ask the ordinary boy, "What do you come to school for, John?" He says, "I come to school so that I can learn and get ahead in the world."

The day we graduated from the school in Yipsilanti, over our heads were the words, "Knowledge is power." Whose power? *My* power. "I have come to this school to get knowledge for my power, for my benefit." When this crowd of us went out

on the street, we did not say "Thanks" to the city which was educating us. We did not utter anything in chorus or in chant, or show that we realized what the town was doing for us. Not a bit. We shouted about ourselves. "Who are we, who are we, we are the class of '83," as though that made any difference.

As for showing gratitude to the town which educated us, not once in all of my school course from kindergarten through high school, through the university, not once was there emphasized upon us the obligation. But we were indebted, not to our parents, but to our town, to our state, to our country, for what they had given to us day after day. Although the hard working farmers of Michigan gave of their earnings to support that university, yet whenever any boys' prank was committed, the President assembled us in the chapel, and what did he say, "This is a disgrace to you, a lack of gratitude?" No. He said, "Hush, don't let these things be done or the legislature will withhold from us the appropriations which will be needed." This was not American ideal, not the cultivation of American generosity, not the fostering of even American honesty—of wishing to pay back to the community which educated us something nearing the value which we had received.

You take any boy of the city in school and say, "John, you know now, don't you, who is paying for your education, that it is by the whole community? Well, what have you done for the community since you have been here? You have been taking it day after day and giving what? If an automobile should end you on the way home, where would your account stand? When are you going to begin to do something? Are you going to wait until you have skimmed the profits and the earnings of the thousands of people, and then be able, like Rockefeller, to establish a university, or like Carnegie, to establish a library that costs the town more than it can afford to buy books? What makes Rockefeller and Carnegie the only real American citizens? What can *you* do for your town now while you are young and while you are receiving?" He blinks his eyes and finds the answer hard.

You do not know a town in this United States but what needs to have something done by every boy or girl that is worth while.

You do not know a town whose streets with the most perfect street-cleaning department are as clean as those streets can be if more people paid attention to them.

I know a school in Richmond which every Thursday goes out on the streets—the boys and girls with baskets on their arms that they made in the basketry "fad and frill" department of the schools, and with sticks in their hands and with stickers of metal on the end of these which they made in the workshop of the school. When they go outside they go so that each boy has his portion of the street from this corner to that one, and the next boy has another part. Out in front around that school they have allotted certain portions of the streets, each one has his own. They go out with the stickers. They do not stick the people that throw bananas on the ground, as they ought to. They stick the bananas and the papers and they put them in the basket and they walk back joyfully singing, "Yes, we have some bananas, we took them from the street." They put the gathering back of the school in the box. The street-cleaning department comes and gets. It is not a silly idea to make scavengers out of high-school boys and girls who ought to have mental disciple by studying algebra?

A woman who felt so came to the principal and said, "I will not have my daughter a garbage collector." The principal said, "She need not do this. I was just trying to think of something that would make us a little less selfish because we are continually taking from this town and doing nothing in return. It does not seem to me that it is unsanitary, or that we would be ashamed to do it. I remember that One whom you and I profess to serve was not above washing the feet of his companions." The woman blinked, looked at him, and said, "Why, I'm a Methodist, too." She continued, "Let her go out with the rest, but be sure you tell her not to touch the dirt with her hands." He said, "That is what we are telling all of them. We are teaching public service and sanitation combined."

I know a school in Keene, New Hampshire, where they gave entertainments to raise money to send the senior class to Washington. Every year they raised $1,500 to $2,000. The whole

senior class with a chaperone went to the national capitol. It was a good civic education. It gave them a chance to look at that beautiful house where each one of them expects to live some day.

But it occurred to the young president of the class four years ago to remark, "Say, fellers, this is selfishness. I'll tell you what we'll do. This town has been trying to get a park for years and the project has stopped. Let's turn this $1,800 into the park fund." They did. And ever since then they have given these entertainments, raised this money and instead of spending it on themselves and going to Washington, have made the electricity run up and down the back of every live teacher when she hears of it. "How generous these young citizens in New Hampshire are in their own town."

That is a fundamental—one of the things for which the public school was established—the general welfare. We all agree with it? I see heads nodding here, there, and everywhere. We believe in it. We think we do.

We have them sing, "My country, 'tis of thee, sweet land of liberty." And we know it so well that we do not stop to consider that they do not know what it is. If we sometimes try the experiment of having them try to write the hymn they are singing, we will find foolish mistakes, showing that they have no sense of the meaning whatsoever. It is lip service.

Patriotic orations which are delivered from the stage in the high school urging the people out in the audience to be patriotic, but they are doing nothing. It is "Rah, rah," patriotism. It is yelling about it. You psychologists who are interesting and also dangerous people—and there are many of you in the audience—know this, that if you develop an emotion like patriotism and then do not do anything or give it a chance to work out, it decomposes, it rots in spite of you.

Therefore, we must devise some means by which our children will not only shout patriotism, but will have in their regular school exercises something they can do for Columbus, something they can do for Dayton, that at the close of the year when we come to sum up the record of everybody in our school system, we will be able to say to our town, "Not one child in our school, but who

has himself done something for Columbus. He earned the money to buy a book and to put it in the public library. He saw a street sign that needed repainting and he got a ladder and fixed it. He helped cut the grass in front of the jail. He did something for the town."

But, as you remember, your old friend Benjamin Franklin said to us with regard to the products of the public school: "When you come to your last day and you review that which makes your life, the question to be asked is not this: 'What degrees have you? Where did you study? What do you know?' But, 'What did you do for your fellowmen?' "

GENERAL SESSION
SATURDAY, APRIL 5

Supt. Collicott: We hesitate to begin our program while the crowd is assembling. We have, however, three speakers this morning—each an outstanding American educator—and we are anxious to complete the program on time and so give everybody an opportunity to hear each of our speakers.

A little more than a year before the close of the World War, there was a notable educational conference held at Washington, D. C., and our first speaker was one of four national educators appearing on that program. The Chairman of the meeting said he had had a number of inquiries as to which one of the Finegans the speaker was, and he said he hardly knew except that the prominent Finegans could neither read nor write. The first speaker, a western governor, made a very unusual address. When Dr. Finegan was introduced as one of the Finegans, perhaps the one who could not read nor write, and his first statement was that if he had known that he was to appear with such prominent educators he would have undertaken to secure help and would have tried to prepare a speech which would have been in keeping with the paper just completed by the governor. He said that he wished to endorse this splendid paper in its entirety, whereupon the governor passed Dr. Finegan his paper. Dr. Finegan looked at it, handed it back, and said that he could not read it. The chairman immediately said, "This is the same Finegan."

This morning we have the pleasure of hearing Mr. Finegan, the man who did such wonderfully constructive work in New York in the Department of Education, the man who later did the unusual piece of constructive work in the State of Pennsylvania. We shall have the opportunity of hearing him discuss "Standards in State Educational Administration." I am sure it is a great pleasure to me to present to you Dr. Finegan.

STANDARDS IN STATE EDUCATIONAL ADMINISTRATION

T. E. Finegan,
Washington, D. C.

Mr. Chairman, Ladies and Gentlemen:

The subject assigned to me is not only a broad one but it is an important one in view of the vital relation which education now bears to our whole social and economic fabric. It will be possible to touch upon a few only of the outstanding features of this great question. I shall, therefore, discuss only four of the chief points of the state's interest in the administration of a state system of education. These are:

1. The relation that should obtain between the state and local administrative units or the spirit and character of the state's guidance and interest. I regard this as the most important aspect of the whole subject
2. The type of state organization that should be maintained
3. The vital relation of the teacher to a general or state system of education
4. The state's financial obligation

There has been a general practice followed in this country which has come to be recognized as the American policy in the administration of public education. There is one fundamental principle upon which the administration of public education is based in Ohio, in New York, in Pennsylvania, in Massachusetts, in California, or in any other state. This principle is expressed in the constitutions of the several states. The substance of this is that the legislature shall provide a system of free common schools wherein all the children of the state may be educated. While this provision is more elaborate in the constitutions of some states than in others, it has come to have one general meaning throughout the country.

In Ohio as in other states this provision of the constitution has been supplemented by legislative enactments known as the education or school code. This document sets up the whole machinery—local and state—for the organization and administration of public education. Interpreted in connection with the con-

stitution as it must be, it expresses the general relation and spirit that should be manifested on the part of the state and of each administrative unit toward each other.

This constitutional mandate is that there shall be a "system of public schools" or a "system of common schools." There is no state constitution which provides for a series of detached, independent schools. Each constitution calls for a "system of schools" and many of them specify that it shall be "adequate" or that it shall be a "thorough and efficient" system of schools. Under this general mandate there have been developed systems of education in the several states capable of adjusting themselves to increasing demands so that they may better serve our growing and complex civilization.

The general plan which has been developed in each state has been similar in a marked degree. The state has been divided into districts; officers have been chosen to represent such districts; other officials have been chosen to represent the state and each of these classes of officers have been created for the purpose of representing the school district and the state. Every superintendent, borough, district, county, or city, and every school director, trustee, or member of a school board is a representative and official of the state as well as of the school district or administrative unit which selects him and which he immediately serves.

There is no body of officers anywhere in the country clothed with greater responsibilities or vested with larger powers for the proper discharge of their official obligations than the school directors of each state in this Union. The law places full responsibility upon each board of school directors and also confers adequate power and authority upon them for the operation and maintenance of such educational facilities as the needs of the community require.

Among the important powers and duties of such school officers are: the employment and dismissal of teachers, superintendents, and other officers and employees; the adoption of textbooks; the purchase of school supplies; the selection and purchase of school sites; the repair and erection of school buildings; the extension of the school term beyond the legal require-

ments; the expansion of courses of study beyond the minimum courses; the enforcement of attendance and other laws regulating the schools; the levy assessment and collection of taxes; the determination of the types of schools, and such other duties as the law provides for the purpose of maintaining schools which shall meet our social and economic needs as they change from generation to generation.

The investment of these powers and functions in local officers chosen by the inhabitants of their respective districts has been a wise procedure. Such method stimulates local interest and initiative in educational progress; impresses upon the people of every community and, therefore, upon the entire state, the necessity of providing adequate educational facilities for its children; enables all the people to measure more accurately the value of education and results in an economy of administration and in a wiser plan of expenditure than could be obtained under any other policy of administration.

The state administrator should always keep in mind the fact that the public schools are under the control, management, and operation of school officers chosen in each district. The people of each of these districts tax themselves to support such schools. Each one of these schools, no matter how small or how remote from the centers of industry, of trade, and of commerce, is making its contribution to the solution of the great social, economic, and political problems of this great democracy. Each one of these districts vies with the other in its efforts to do that which shall be of greatest help in the training of the boys and girls who are attending school therein. Through such plan the highest types of schools, under wise leadership, may be developed.

The state as a whole has an interest in education and, therefore, has an interest in each one of these districts or local administrative units. Taken as a whole, the schools maintained within a state constitute the state school system ordained by the constitution. The legislature of every state in the Union has even decreed that all children between specified ages shall attend these schools or equivalent schools for a definite period of time each year for a specified number of years. The state has recognized

that many of these districts need no assistance or guidance; that many of them, because of their area, population, and wealth, can easily provide such facilities of every character as are essential to the intellectual needs of their children. The state has also recognized that, because of the unequal distribution of people and property, the great majority of these districts are not financially able to provide the necessary facilities to enable them to meet these needs of their children. To aid in the establishment of facilities which shall supply these needs, to equalize educational opportunity, to give to every boy and girl in the state a fair chance to acquire the best education possible, the state renders assistance in many ways and even appropriates millions of dollars to support schools and apportions such funds upon the basis of the relative financial needs of districts.

Each state has created a state supervisory school officer who is the head of a state department charged with general supervisory powers in public education. The powers and duties of such officer and such department are clearly and definitely set forth in the law. They do not in any way infringe upon or usurp the functions of local school officers. They relate, in brief, to the proper enforcement of all educational laws throughout the state; to the establishment of minimum educational standards for all schools; to the administration of certain lines of work which must be given general direction by a state agency if they are to be made effective, such, for instance, as attendance or vocational education; to giving advice to school officers in relation to the functions which they are required to perform; to advising and informing citizens, parents, guardians, and pupils in relation to their rights and duties; to the administration of normal schools and the training and certification of teachers; to the preparation of blanks and forms to aid local officers in the performance of their administrative functions and to collect data in relation to the operations and needs of the school systems so that the state representative shall be able to advise the people and the legislature as the law requires on means and measures for the promotion of public education.

It is clear, therefore, that in each state the constitution and

the laws contemplate that there shall be a coordination of the educational work of the state. A few of the many advantages arising from this coordination are: That the features of work in one community which may prove valuable to another shall be made available for that purpose; that the practices in vogue in any community which do not conform to sound business educational procedure shall be pointed out and remedial measures suggested; that the best modern thought on school administration, on classroom work, and on the business and economical management of the schools shall be made available for all teachers, all superintendents, and all school officers; that there shall be leadership in public education that shall be sound, progressive, practical, stimulating, sympathetic, and which shall provide such assistance in the solution of any problem, or in the organization of any work as may be needed in any school in the state. This leadership must be founded upon the principle of cooperation between the state and each locality, and it must recognize and provide the greatest freedom, authority, and initiative on the part of each community.

This general plan is a simple one and yet it is a source of great friction and misunderstanding. There are generally objectors to any movement which is intended to change the order of procedure in any line of work. Every community contains its full quota of those who desire to continue to do things as their fathers did them and protest against changes on the ground that "we have never done it that way." This is just as true in education as in other affairs. Every great reform in education—yes, in all essential progress—has been accomplished by someone having the vision to see the need of changes and the courage to fight for them.

Progress seems so slow in educational reform and so many unnecessary obstacles are placed in its way by selfish interests that all of us become discouraged at times. In periods of depression and discouragement I find consolation in reviewing the history of educational development in this country to ascertain what the problems and discouragements of our fathers were. It will strengthen the conviction and inspire the faith and courage of all

of us, if we keep fresh in our minds the great battles fought in behalf of educational progress by such leaders as DeWitt Clinton, Horace Mann, Henry Barnard, and Thaddeus Stevens. The utterances of none of these great leaders in the development of education in this country are more reassuring and inspiring than the words of Stevens in his great address in behalf of the free-school law of Pennsylvania. I want to quote one paragraph from it:

> I trust that we shall so cast our votes that the blessing of education shall be poured upon every son of Pennsylvania, shall be carried home to the poorest child of the poorest inhabitant, and the meanest hut of our mountains, so that even he may be prepared to act well his part in this land of free men, and lay on earth a broad and solid foundation for that enduring knowledge which goes on increasing through increasing eternity.

It was my good fortune to have had six years' experience in classroom teaching, to have served as a superintendent having the supervision of over one hundred schools and to have had thirty years' experience in state department service. I know the viewpoint of the teacher and of the local superintendent toward the state and the viewpoint of the state toward the separate locality. The representatives of a state department are not always welcomed, I regret to say, by teachers and superintendents. A state department should be so helpful and the method of approach by the state should be such that every locality will not only welcome the representatives of a state department but will seek such service as may be obtained from the state in the proper solution of local problems.

State departments ought not to be too much concerned in looking after the small incidents of school administration. The exercise of arbitrary power by the state should be a last resort and to meet some important emergency bearing upon the efficiency and effectiveness of the school system. We may profit in school administration by the procedure and practice of such great business organizations as the United States Steel Corporation. The administration of a state school system is nothing more than a great corporation functioning in a business way as well as in a professional way. Several distinct and separate corporations

have been merged in the United States Steel Corporation. Each of these is a separate entity with its own business organization. Each unit is, of course, subject to the general regulations of the United States Steel Corporation. The president of that corporation and other officers refer to each of these separate units every problem and business function which they are designed to perform. The corporation does not undertake to perform such functions. While the president of this great corporation undoubtedly has supreme authority in many ways, he does not exercise it directly but defers such authority to the administrative officers of the separate units with such advice and guidance as his experience has shown desirable. In other words, there is a devolution of authority from the great corporation to the separate units of which it is constituted. A state department under wise leadership will function on this basis.

A great amount of energy and valuable time and money is wasted on "annual inspection of schools." After these schools have been inspected what service of vital importance has been rendered the schools? More constructive work may be done. I have found that the best service which a state department can render is that which a community desires. We had in the state department at Harrisburg a force of trained specialists competent to render assistance to the schools of any community in professional or administrative problems. The school boards and superintendents were notified that these men and women were at their service if they so desired. Although these specialists went into those schools where they were invited, the force of experts had no idle time.

My interest in rural schools is such that I cannot avoid saying a word at this time in their behalf. This is one of the fields where a state department may do its most effective work. The cities generally are able to meet the majority of their problems, although a state department is not properly organized which is not prepared to render them the service which they need.

The organization of rural schools is such that the authorities having supervision of these schools must call upon the state for assistance. The state in its work in these schools should seek to

strengthen their administrative units so that the best schools possible shall be provided. More than 2,200 one-room schools were closed in Pennsylvania within a period of four years and 350 consolidated schools built in their stead. The boys and girls in the rural or farm sections should be given a fair chance to obtain an education. Buildings, equipment, teachers, courses of studies, salaries, and supervision should be comparable to these factors in a good city school system.

The state should render these schools such assistance as may be necessary in the development of consolidated schools, in the organization of junior high schools, in the adaptability of courses of studies to the needs of agricultural life and in the development of public sentiment in the state which will provide the state aid which these schools should receive. Those living and working in the cities are obligated to aid in rendering service which will stimulate proper state-wide interest and cooperation in rural education.

The type of organization which is established for the administration of a school system is an important factor affecting the efficiency of the schools. It is essential to good schools, therefore, to create a sound legal basis upon which the machinery of a school system is established. This is true of city school systems as well as of state school systems. How are state boards to be chosen and a state department to be organized? The same question may be applied to a city board of education and a city department. The practice prevailing in dealing with these questions is one of the serious problems of American school administration. A state board of education should generally be appointed by the governor. The selection of such members at a state election is not desirable. When such method prevails the members are voters nominated because of the party strength which they will bring to the support of the ticket. The best results have been obtained where such members are appointed for long terms so that a governor possessed of a partisan or factional spirit may not be able to obtain a majority of such members during his administration. The New York plan of selecting members of the state board of regents has given that state a non-partisan body

of distinguished men who have administered the affairs of the department of that state with sole regard for the public interest. A state board should be selected from professional and business men and women who are not educators. Public education needs the influence that comes from men and women of large experience and ripe judgment in business and social life.

The state board of education under whatever title it may be known should select the state superintendent or the state commissioner of education. The selection of that officer at the general state election or his appointment by the governor will generally inject partisan and other selfish purposes detrimental to the best interests of the schools. The cases where this action has been the result are numerous as well as recent.

The previous two years has been the most reactionary period in my day in public education. Reactionary forces opposed to education and selfish interests endeavoring to utilize educational appointments for promoting personal and political ambitions have been active in all parts of the country from the Atlantic to the Pacific. Teachers everywhere must assume their responsibilities for correcting this evil. When teachers are well informed upon these problems and will courageously attack those who are endeavoring to prostitute the schools to their selfish interests and ambitions and will hold such persons up for public censure, the people will sustain such indictment and will visit political condemnation on all guilty parties. It is our obligation to develop a public sentiment which will demand that all educational activities be administered from the standpoint of the needs and rights of children and not from the viewpoint of political expediency.

I should be ashamed to confess here this morning the number of cities in this country in which the superintendent of schools is chosen through the dictation or influence of mayors or political organizations. Shall superintendents of city school systems be chosen upon the basis of the promotion of the interests of public education or the promotion of the interests of the political organization which controls the city? We as teachers are legally and professionally responsible for the administration of public education. We must make a vigorous fight for a school organization

which will confer upon the legally constituted school authorities the supreme right to determine educational policies and to select city and state educational administrators upon their achievements and merits and with regard to the interests and progress of our children's schools.

It should be no part of a mayor's or governor's functions to select educational administrators. A governor recently said in a public statement, "I am not only responsible for the man whom I select as the head of the school system, but I am also responsible for his policies and the methods by which he administers such policies." It is just as unethical and reprehensive for a governor to arrogate such power to himself as it is for a mayor of a great city dominated by a corrupt political organization to assume such authority in the selection of a city superintendent of schools. So I wish to emphasize the point that leadership in education in the determination of policies and in the selection of personal staffs shall be professional and not political.

There is nothing which so discredits a state department of education and makes it ineffective and inefficient as the appointment of men and women on its staff for political reasons. The thought that a man appointed to a position in a state education department must be a resident of the state is repugnant to every sense of right and justice. Men in a state who have rendered distinguished service in education should be rewarded if by so doing the interests of education will be promoted. When there is an appointment to be made, however, and a man available who has larger capacity and richer experience and who can render a larger service to the schools than some resident of the state with political influence, the non-resident should be selected. Why should not a state department of education in the selection of its professional staff do as the president of this university does when he desires a head for one of its departments? He searches the country for the best available person to be found. When we place education upon the professional standing which it should attain, this principle will be the guiding spirit.

The third point under consideration is the teacher. The teacher is the most important factor in a public-school system.

There is not a state in the union which capitalizes the knowledge and experience of its teaching force as it should. There is not a city or other community which properly capitalizes the professional asset of its teaching force. Ohio has 36,000 teachers; Pennsylvania, 50,000; and New York, 60,000. There are numerous cities having 2,500, 3,000, 5,000, 6,000, 8,000, 12,000 and New York City even 25,000 teachers.

Here are thousands of teachers professionally trained for their work, meeting all the classroom problems which confront a school system, having daily experience in every phase of public-school administration and nearly all of these able to make a great contribution to a sound philosophy of education and to the proper organization and administration of a public-school system. To illustrate my point, let us consider a community maintaining a school system of fifty or one hundred teachers. The head of that system, if he is wise, will so organize that entire force as to get from it an honest expression of judgment upon the problems of that school system. It will be a judgment that is formed without prejudice and expressed with independence. It will not be a judgment that is formulated or expressed by the superintendent or by any group or factions of teachers in the system.

The same procedure should be followed in the cities where thousands of teachers are employed. The educational program of a state should be organized under the same plan. The public school is the greatest agency of democracy in the land. Its very life and purpose is to preserve democracy and bring its beneficent influence to bear more potently and extensively upon all the people from generation to generation. An institution dedicated to the service of democracy should be not only organized but administered upon a democratic plan and policy.

The 36,000 teachers of Ohio should be given the largest opportunity possible to express their professional judgment upon the educational problems which confront the state. Place responsibility upon a great teaching force and they will generally discharge it in a manner not only creditable to the profession but to the advantage of the children and the taxpayers.

The finest service in my experience came from 1,500 leading

teachers in Pennsylvania whom I summoned in an educational congress for one week where every phase and interest of the public-school system was given consideration in section meetings at round-table conferences. These leaders formulated a program which was enacted into law by the general assembly of 1921 and became known as the Pennsylvania Education Program. City programs should be formulated under similar plans. A wise superintendent will seek the assistance and cooperation which the training and experience of his teaching force may make available. The progressive spirit of a state or local program in education can be measured by the status accorded the teacher in such systems. Give teachers, therefore, standing in their profession and expect them to participate in the solution of troublesome problems and in the formulation of programs.

The last point which I wish to consider briefly is the financing of education and the concern and obligation which rests upon the state in this matter. The problem of financing education in Ohio is no different than such problem is in other states.

In 1910, in the state of Ohio, the proportion of all expenditures, state and local, for governmental or public purposes, devoted to education was 19.1 percent. In 1920 it was 21.8 percent. In other words, in Ohio in 1910, out of every dollar devoted to public purposes only 19.1 cents was expended for public education. In 1920 out of every dollar expended for public purposes, 21.8 cents were devoted to public education. In 1910 there were 46 states in the country devoting a larger percentage of her public funds to education than Ohio was devoting to that purpose. In 1920 there were 43 states devoting a larger percentage of their public funds to education, than Ohio.

I am not making these comparisons for the purpose of indicting your state in any way whatever. There are richer states than Ohio standing in a relatively lower position in this respect. The great rich state of New York was lower in the list than Ohio. New York like all the other states is having her trouble also in financing her educational enterprises. I am calling your attention to some of these facts because they are factors which enter into the formulation of any financial plan relating to education. They

are facts which it is desirable to understand when dealing with the critics of educational expenditures.

One of the sound measures of expenditures for education is the proportion of a state's economic income which is devoted to that purpose. In 1910, Ohio invested in educational enterprises 1.5 percent of her economic income. In 1920, the amount was 1.7 percent. In the list of states in 1910, Ohio was number 25 and in 1920, number 27. Ohio, therefore, stands about on the medium line. The amount of the economic income expended by the states for education in 1920 ranged from 0.8 of one percent to 4.4 percent. Montana, the state standing at the head of the list under the survey of the Sage Foundation, is the state which expended 4.4 percent of her income for education.

The general system of taxation maintained in a state has a bearing upon the ability of that state to finance her educational activities. In most states the systems of taxation are antiquated. There is a need for general reform of taxation methods. The great burden of taxation for all enterprises now falls upon real property. It is impossible to support the school programs, to maintain the types of schools and the standards which are now being generally exacted in either the cities or rural communities by imposing a tax upon real property. Real property does not represent the wealth or the property which should be taxed. The income of individuals and not the title of property vested in them is the correct measure of their ability to pay taxes.

The critics of public expenditures declare that education is costing too much and that appropriations and tax levies for these purposes must be reduced. The increased burdens of taxation may not be properly charged to education only. Other public enterprises have made their demands upon public treasuries. General government, health, charities, public safety, and highways—all worthy and deserving public interests—as well as education, have received enormous increases from public revenues. Last year from the expenditures for all public purposes in the entire country, one dollar of each nine was devoted to the support of education. Only 1.6 percent of the economic income of the nation or 1.6 cents out of each dollar of the national economic

income was expended for public education. This does not represent an expenditure of an undue proportion of funds for public education.

It is, therefore, in my judgment incumbent upon state departments and state leaders in educational service to defend expenditures for public education and to be advocates for such additional appropriations as are necessary for the proper expansion and development of education programs which are projected upon sound bases.

California is the one state in the Union which has placed the financing of her educational system upon a sound basis and which has properly incorporated the fundamental features thereof in her constitution. The amount of funds which a state shall contribute for the support of education ought not to rest upon the action of a legislature. Such amount should be based upon an elastic provision so that increased funds will be provided for the growth and expansion of school systems.

We need an intelligent campaign throughout the country on the costs of education and the methods of financing such projects. This is one of the great problems in educational administration. It is the function of state education departments to lead in these matters. The tax system of the Federal government has encroached upon the state's resources for financing state interests. Within the last ten years Pennsylvania has paid in taxes to the Federal government an amount which, if funded and yielding an income of four percent, would provide for all time to come a yearly income in excess of the annual cost of all educational activities in the state. Other states generally have made like contributions to the Federal treasury. The wealth and the income of the country is sufficient to support adequately a system of education meeting the needs of our present civilization.

This visit to Ohio has been one of great pleasure. I was at this university about twelve years ago and remember with much satisfaction the cordial greeting accorded me by the President of this university. It has been my pleasure to meet him many times since that occasion, to have formed a great admiration for him, and to have kept in touch with the great work he has done,

not only for Ohio, but for the country, in the building of this great university. In twelve years there has been a great development in this institution and Dr. Thompson has not only erected a monument to the good name of the state, but a monument which will give wisdom and vision to generations of citizens of this great commonwealth.

I congratulate the educational workers of Ohio upon having at your service this great institution. While I have always found state associations and local associations helpful in the advancement of educational programs, I also found that School Men's Week at the University of Pennsylvania a most potent agency in formulating educational policies and promoting their interests. The spirit of cooperation which this university is fostering with the teachers of the state means the establishment of a most effective agency in promoting educational progress. I congratulate Ohio upon this opportunity and spirit.

STANDARDS IN EDUCATION FROM THE VIEWPOINT OF SOCIAL SERVICE

E. C. Hartwell
Superintendent of Schools, Buffalo

The time that human life has existed on this planet has always been an interesting source of speculation. Some years ago when an ancient skull was unearthed in California, the scholars and scientists gathered from all parts of the United States—the anthropologists, the geologists, the archaeologists and the other "ologists"—to determine if possible how many years had elapsed since the original owner of this skull had been walking the earth. One of them said 300,000 years, another said 200,000 years, and still another said 100,000 years. A discrepancy of 100,000 years in their estimates meant nothing in their scientific lives. In order to secure a unanimous verdict from the jury they all finally agreed that at any rate it was a very long time ago, and that in comparison therewith the known history of mankind was very brief. In a great speech to which I recently listened, the speaker

illustrated the fact with the face of a clock. He said: "If you imagine both hands of the clock to stand at twelve and each five minute interval on the dial to represent the passage of five hundred years, the revolution of the hands of the clock from twelve till one will represent all of the time of which we have any history." At twelve o'clock pyramids were being built; at five minutes after twelve Egypt as a great power had passed; Chaldaea was in its prime. And so on around the face of the clock, through the rise and fall of the great empires of the past. It was not until twenty minutes to one that America was even discovered. It was not until after two minutes to one that the Republic of the United States was born.

The men to whom we almost reverently refer as the founders of our Republic were profound students of history. In the great work of forming the Government of the United States, they had an intelligent appreciation of the experience of the past. They founded in the new world a government on the principle that "all governments derive their just powers from the consent of the governed." Every one of the men who had a part in this great work in public and in private, repeatedly called attention to the fact that if this theory of government were to succeed, then there must in some way be secured for the governed a reasonably high level of both intelligence and virtue. They were not satisfied to rely exclusively upon a level of intelligence. The ancient history that I studied as a boy in school contained this sentence, and it made such an impression upon me that I have remembered it all these years: "The average intelligence of the Athenian democracy in the days of Pericles was as much superior to the average intelligence in America today as our intelligence is superior to that of the negroes in the jungles of Africa." Another authority tells us that there were at one time in Athens ten men who have more influenced human life than any other ten that might be selected from the entire history of the world, Jesus Christ alone excepted. But the Athenian democracy passed. The founders of the Republic voiced their conviction regarding the necessity of maintaining this level of intelligence and virtue when they wrote into the Northwest Ordinance that "Religion,

morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." This has been as much an essential part of our theory of government as democracy itself.

Territories organizing for statehood and drafting constitutions on the basis of which they have applied for admission to the Union have on more than one occasion been informed by Congress that their proposed Constitution did not give sufficient protection to the institution known as the public school. Many of our State Constitutions do not concern themselves about the fire department or the police department or the department of public works, important as all of these matters are; the theory has been that they may safely be left to local authority. The support of public education, however, has not been left to local caprice. It has been safeguarded in the fundamental laws of the commonwealth. This has been in harmony with the theory of the founders of the Republic.

The state compels children to go to school whether they wish to attend or not, and whether their parents wish them to attend or not. This is because the state has a paramount interest in the character of its future citizenry. The future security of the state is the only justification for legislation of this sort. There are men who can remember when the great issue of public education was fought out in some of the eastern states—why Mr. Jones with no children should be taxed to provide an education for the children of Mr. Smith. The only theory that justifies public taxation for educational purposes is the theory that the state is so vitally concerned in the character of its future citizens that it may tax all of its people for the maintenance of that level of intelligence and virtue without which experience has shown efficient government in a democracy to be impossible.

We have not relied exclusively upon the schools for the maintenance of moral standards. There have been at least two other great agencies upon which the state has relied for assistance—the church and the home. Neither of these are tax-supported institutions and neither of them has ever been expected by the state to accomplish the purpose unassisted. We are told today by

religious workers that 50 percent of the rising generation are untouched by any religious influence. As teachers we have ample reason to believe that the home as a character building agency is not as effective as it used to be. In my boyhood there was an institution known as "the American breakfast." The family all sat down to the morning meal together. Possibly the day started with a reading from the Bible, or with prayer or some other religious observance. The family gathered together again at noon for what was called dinner in those days. They came together again in the evening and after supper the evening was spent in a way which the present generation would regard as dull, indeed. Some apples were brought up from the cellar or some popcorn was popped; someone read aloud, and at nine o'clock everybody went to bed. Today the American breakfast has disappeared. In its place we have what I recently heard described as "the great American relay." Everybody rushes off to work. It is a rare family that comes together in the middle of the day. At night the evening meal is hastily eaten, because father has to go to lodge or to some one of the innumerable committees of organizations which it seems impossible to escape. The comic strip and the funny columns to the contrary notwithstanding, there are a great many men who go to these meetings reluctantly. Business and society have been speeded up so that it is almost impossible to find time for an evening at home. Possibly mother who has been busy all day with domestic responsibilities is anxious to get out in the evening, and there are innumerable things offering themselves for her pleasure and profit. The children clamor to go to the movies and the thing we used to know as the "family circle" has almost ceased to exist. The parents whom I know acknowledge frankly that in the matter of home influences, things are not what they used to be. Am I saying that the school can ever take the place of the church or the home? Not at all! I am only saying what every teacher knows that every day seems to find an increasingly large responsibility placed on the school for the ideals and character of the children in attendance. I am asking you to remember that not all of the demands made on the school are of equal importance and that

the founders of the public-school system placed as the objective of supreme importance a training for useful citizenship.

This year I am teaching a class in the State Normal School at Buffalo. In this class, I have representatives from nearly every branch of the educational service. Recently we have been discussing what the public has a right reasonably to expect from the product of its elementary schools. We have given due consideration to the word "reasonably." I have tried to have each member of the class feel that he or she is in charge of an elementary school, built and supported at public expense and to answer in definite terms what the public has a right reasonably to expect as a product. Of course, having taught school for some years I know that a class sometimes answers what they think the teacher wishes them to answer, and it is entirely possible that this has occurred in the class which I am teaching. I like to think, however, that the answers I received to this question were the result of thoughtful consideration. The entire class agreed—and whenever thirty-seven teachers from different branches of the educational service can agree, the event is noteworthy—that it was reasonable for the public to expect as the first objective of the school a proper training in the foundation of character and citizenship. I endeavored to secure from the class a differentiation between training for character and training for citizenship. They told me that there is a difference between personal virtue and civic virtue. In the personal virtues they listed such things as honesty, courage, respect for authority, respect for the rights of others, and fidelity in the discharge of responsibility. Of course all of these personal virtues are necessary to good citizenship. Do you know any Pollyanna so optimistic as to suggest that the last decade has seen any growth in respect for authority? What progress are we making as a people in these personal virtues? What progress are your pupils making? The class listed among the civic virtues—knowledge of the history, government, and institutions of the country, willingness to accept the duties and responsibilities of citizenship, and peace-time patriotism. I was immensely gratified at the answers I secured from these thoughtful and earnest teachers.

Most of our elections show that less than three-quarters and in some cases less than one-half of the people eligible to vote exercise the privilege. Neither are we able to escape the conclusion that a great deal of social, political, and economic unrest in this country is due to an absence of information about the history and growth of American institutions. We are all familiar with the man whose private life is upright, but whose citizenship is of a very low order. He is unwilling to accept jury duty. He is unwilling to be a candidate for office. He is unwilling to even register in the primaries. What are you doing in your school to meet the situation? There is no question about our patriotism in time of war. Neither is there any question that in time of peace the patriotism which is concerned about the good name and the efficiency of our government is very much less alert, intelligent, and active. I have not attempted to give you the complete answers as developed by this class to the question as to what may reasonably be expected by the people of the product of the elementary school. One thing, however, is apparent. If the fundamental purpose of the school is properly to lay the foundations for citizenship and if the public have a right reasonably to expect what this class of teachers acknowledged to be a reasonable expectation then the work of the school in character building and in citizenship should not be accidental and incidental. It should not be a by-product of other activities. It is the chief business of the institution. The test to be applied to the course of study should not be: Does it prepare for entrance to the high school or to college? Does it satisfy all the whims of all the enthusiasts in and out of the profession? Does it conform to all the hallowed traditions of the past and the local prejudices of the present? The test is, does it assist properly to lay the foundation of character and citizenship? Exactly the same acid test should be applied to all extra-curricular activities. The test to be applied to discipline is not: Is the room quiet and orderly? But—Why is it quiet and orderly? Almost any experienced teacher can keep a room quiet. The question is: Is the teacher through her discipline teaching pupils respect for authority and respect for the rights of others; is her discipline maintained with these

definite purposes in mind? I know that in this audience there must be some teacher who has had the blessed and precious experience of having personally to interview a board of school trustees in application for a teaching position. Let us suppose for a minute that sitting over here at the right is a school board, every member of whom understands and accepts the views of the founders of the republic on the question of public education. They are interviewing various candidates for teaching positions in the school for which they are responsible. The first question to be settled in their minds about the teacher must of necessity be, can she conduct her school in such a way as to give her pupils the foundation of a sound character and an intelligent citizenship? I think our graduate schools of education have done and are doing a splendid piece of work. I think the normal school is the most important state institution in the commonwealth, and it is one of the great tragedies of the present time that our state legislatures do not recognize the importance of more generously supporting those institutions where the teachers of the future citizens of the state are trained for their work. We need all of the light we can get on educational philosophy and psychology on educational procedure and technique, but more important than all of these considerations is that the teacher shall thoroughly understand the paramount purpose of the public school and be fitted by character, ideals, and personality so to conduct a school that the product may measure up to the expectations of those who founded and those who support the institution.

Last year in New York City there appeared a most remarkable play written by a young dramatist from Czecho-Slovakia entitled R. U. R. These initials stood for Rossum's Universal Robots. Professor Rossum had perfected a process whereby he could make the models of human beings. A mine operator desiring one thousand men to work in his mine would ordinarily be required to wait until one thousand boys had grown from infancy to maturity. This would be a matter of approximately twenty years. These men would have to be paid. They were not always efficient. They were often troublesome. After Professor Rossum had perfected his process of making Robots, the mine operator

could secure from him one thousand Robots who did work even more efficiently than men and whom he did not have to pay because they did not eat. A large manufacturing concern desiring one thousand laborers no longer bothered to recruit a supply as in former years. They simply went to Professor Rossum and secured one thousand Robots. The great professor could make any kind of Robots to do any kind of service, skilled or unskilled. A great business office requiring a force of stenographers would go to Professor Rossum and secure a supply of Robots. They could operate a typewriter with perfect efficiency, but required no salary because they did not eat. They did not even chew gum. A great war broke out. One of the powers instead of drafting a million soldiers from its youth for "cannon-fodder" as had always been done in the past, went to Professor Rossum and secured a million Robots who were trained to shoot. Then the enemy power did likewise and at the end of the second act of the play you get the impression that nearly all of the work and all of the fighting in the world is being done by Robots. In the third act, a very high class Robot succeeded in organizing all of the other Robots. They killed off the few remaining human beings left in the world, but no Robot knew enough to make any more Robots.

There are a great many people today who apparently feel that it is the business of the school to turn out Robots. We hear complaints that the product of the school is not industrially efficient. There is a continuous clamor for having the product of the school trained to do certain specific useful things in the world. I sometimes think that even we who are in the profession are more concerned about the individual efficiency of the product that we turn out than we are in whether that product recognizes its obligation to the system which made possible their education. The public has not taxed itself for the purpose of making individual boys and girls rich or famous. It has established and supported a public-school system for the purpose of educating boys and girls who shall be useful members of society; whose lives and work shall assist to maintain that level of intelligence and virtue

without which neither this nor any other democracy can permanently endure.

Superintendent Collicott: On behalf of the superintendents, teachers, principals, and supervisors of the State of Ohio, I wish to express our very hearty appreciation of the opportunity of attending this Annual Conference provided by Ohio State University through the kindness and the foresight of the educational leadership of President Thompson, of Dr. Arps, and the members of the Educational Department and the other departments cooperating in the promotion of this splendid education meeting.

I am also authorized to express the appreciation of the University authorities for the splendid cooperation shown by the educators of the State—the teachers, the principals, the supervisors, and the superintendents. I think I should also add to President Thompson and Dr. Arps and all of those who are responsible for this program the unanimous appreciation of 41,000 children in Columbus for the vacation yesterday.

The next speaker is known to all of you. His subject is "Pedagogues and Politics." No man is better qualified by training, and especially by experience for this unusual subject. I take great pleasure in presenting Superintendent McAndrew of Chicago.

PEDAGOGUES AND POLITICS

William McAndrew
Superintendent of Schools, Chicago

Fellow Citizens:

There is some conflict of authority here. When I wrote to the Duke of Buckingham acceptance of taking Professor Horn's place and rattling around in it, I suggested to him the subject, "Schools, Standards, and the Solid Citizen," a beautifully alliterative title which fits in to the general plan of this convocation.

When I wrote to George I, Dean Arps, regarding the subject for a speech to be given last night, I suggested "Pedagogues and Politics," which somehow or other got twisted into "Forgotten Fundamentals." Although you well know that after the first two or three lines of any address, it does not make any difference what title has been given to you, you swing it around into that which you are desirous of getting out of your system.

Now we are in a position where we must call upon the reservoir of judgment which is represented in the rank and file of the teaching and supervising force. We must ask you, in order to have a democratic management of this meeting, which of these two discussions you are most disinclined to hear.

We are now about to vote. In exercising your right of suffrage, be not inclined to follow the lead of demagogic suggestions such as Chairman Collicott is trying to put over. Do not be influenced to vote for or against the subject because he seems to like it, but with a view as to what is best or worst for this community here gathered, make up your decision on these two subjects.

I am first going to put the question: All who are opposed to hearing a continued discussion of the service of the schools in a systematic direction, that is those who are opposed to the subject "Pedagogues and Politics" will say "aye." (Silence.) Second, those who are opposed to hearing a discussion of "Schools, Standards, and the Solid Citizen" will say "aye." (Ayes) You then are to be inflicted with an entirely impromptu speech. For last night, "Politics and Pedagogues," disguised under the alias of "Forgotten Fundamentals" was presented to you.

We are, therefore, to take up the suggestions that have been given to us by the two eminent educators who preceded me, and we are to consider in detail some of the suggestions that have been made as to the service of schools in the directions indicated by Dr. Finegan and Superintendent Hartwell.

The point made by Dr. Finegan that the schools, according to their origin and according to their legal status are not for scholarship but for service is one which has confused many

graduates from our colleges and teachers' schools for years past. Our experience in the study of education in the teachers' courses has been that a large portion of the history of education has been concerned with education in other countries, and little of it with education in our own land. But when two men of such wide experience as Mr. Finegan and Mr. Hartwell coming from different localities have emphasized so vigorously the fact that it is not European education, but American education to which we are committed by our loyalty, by our patriotism, and by the source of our financial support, it is well worth while for a company such as is assembled here to inquire what are the distinctions between European and American public education, if there are any.

If you will consider briefly how our European education got into this country and how much of it persists and then will consider for a few moments what the founders of our public-school system expected education to do, you will see that the distinctions made by Mr. Hartwell and Dr. Finegan are of vital importance. If you will look at the course of study of the Columbus schools and then look at the course of study of the schools of Buffalo and then of Albany, or of any group of schools, you will discover a remarkable similarity—a similarity so close that you must assume that there have been borrowings and imitations of an earlier type. It will be possible for you, looking back through the history of school systems, to find that almost all of our fundamental ideas were borrowed from Boston, and to a great degree in the higher ranks of our public-school system from the Boston Latin School.

When you come to trace the origin of most of the Boston schools which are the fathers of our own, you will find the school came from England at the time of Queen Anne.

When you come to inquire what the purpose of that education was in monarchial England, you will discover how clearly it was intended to be the education of the higher ranks of English life. You will find that the term "gentleman and scholar" were linked together so much that one suggested the other. Perhaps

you have seen traces of the continuance of that linking, even in our own educational institutions.

What was a "gentleman," for whom the educational system of the private schools of England, the fathers of the public schools of New England was intended? If one came in through this green curtain here, would you recognize him? You would know him first by his long hair, second by the ruche or ruffle around his neck, and next by the lace that came out from his sleeves—all indicating that he could not sweat. He was one who did no work with his hands. He represented the lilies of the field which toiled not, neither did they spin.

For such a person the educational system was devised. It also was a starched ruffle, a lace-cuff education. It consisted of the refinements of learning, ability to quote from foreign tongues, ability to recognize and speak of the nuances of literary composition, of rhetoric, the refinements of grammar, ability to compose with the pen; some smatterings of polite science, desire to collect a museum in one's own manor house. All of these things made the education that was imported to this country and which was here when the Revolution of '76 took place. Education consisting of ideas for leisure, for refinement, and for personal distinction.

You will recall how in this country, abandoned by the Motherland, there was growing up from the earliest times a type of life in which it made no difference what your father was, whether he was a duke or whether he was a common sailor. Here with such resources ready to hand that could bring happiness and prosperity to anyone who was willing to work, there sprang up a regard for the common man. For the first time in the history of the world a nation was founded on the basis of respect and opportunity for the common man.

As was well said this morning, the average intelligence of the Grecian citizen in Athens was superior to the average intelligence of the American nation. But when you consider that the civilization of the Greek nation was built upon a plan of slavery, and that there was not included in the striving of the Greek intelligence these laborers who worked with their hands—vast masses

of common people—it is no fair comparison to make between Greece and America. Greece and Rome and all these civilizations which have been so praised in our studies were built upon the suppression of the common man, upon a system of slavery, of serfdom, which our fathers repudiated. For the first time a nation was built on the basis of respect and honor and opportunity for the common, ordinary, every-day citizen.

Now, when in '76, this revolution occurred and this repudiation of the distinction of birth or of power or of wealth came about, we remade our political organization, and then we assumed, as Mr. Hartwell has told you—and he knows it because I told him and all of you the same thing last night—we then proclaimed that in order that this new social arrangement might be preserved, we would make as part of our Government a system of training year by year. We would tax the entire community for its own preservation, just as we would tax the whole city for the maintenance of a police force for protection.

By doing this, we placed you and me and all teachers in the ranks of Government servants. The purpose for which this system employed us was as plainly as could be a political purpose. It was for the purpose of educating the succeeding generations in political duty. Washington, Franklin, Monroe, Adams, and Jefferson said to preserve free institutions, we shall have a system of education which shall educate the children in politics.

What does "politics" mean? What does it come from? It refers to the *polis* or the city, equivalent to the community or state. *Politics,* of course, means the science and the art of government. And with us *politics* means the science and the art of self-government—one of the finest and most elevated ideas of which American people are able to conceive.

Look what has happened to it. Like Mary's lamb that went to Pittsburgh. Almost always when the word, politics, is mentioned, it brings along with it the suggestion of the word "dirty," even without being mentioned. The same thing has happened to many of our fine words. You take the word *candidate.* What did it originally mean? *Candidatus,* "the white one," because he clothed himself when running for office with the white toga

to indicate his readiness to assume public service. Candidate, "the white one"—and now look at it.

From this fact there has grown up among those engaged in work you and I do, an aversion to politics, an inclination to get as far away from it as possible, so as to remain unspotted from the world. The whole teaching of that doctrine of remaining unspotted from the world never indicated that the righteous man was to isolate himself from his fellows, but that such would be his power of virtue and right that in going into the dirty world to clean it, he himself would remain unspotted. Finegan nor Hartwell nor I can conceive any idea more twisted from the original purpose of the American founders than this, that the school should keep out of politics.

The main business of the schools is politics, but the situation today has become most remarkable in that when elections are held the persons who must seduously abstain from going to the polls, who in the largest numbers with the golf bags go out into the country, are the graduates of universities, the output of high schools, the product of American education. It is one of the most violent reproaches that could possibly be made against us. Here we are employed and paid for the purpose of training for a better participation in public affairs. And when the votes are counted, 87 percent of them are found to be cast by those who never had the advantage of work in our public schools at all, but who came here from foreign countries. Here we are elected and paid for the purpose of preserving our Republic, and when the preserving days come, the days of election, we are not visible. We have abandoned our trust. We have devoted ourselves to objectives of education which are as far from the American purposes of schools as Australia is from Timbuctoo. We are persuading ourselves that it is our business to educate for leisure. Those who instituted and those who pay for the public schools never told you and me that we were hired to educate boys and girls for leisure. They are willing that we should "take off our hats to the ancients, but they expect us to take off our coats for problems that are before us today." Those are problems that

are pressing upon us so immensely as to make some of the service that we do the most wretched farce of modern times.

We had in New York an organization, the University of Michigan Club of New York, and its meetings were almost entirely social. But when John Blair got the presidency of it one year, he thought that something ought to be done in an educational line. When a professor was known to be on the way back from Athens where for ten years he had been at work excavating among the ancient ruins, John Blair got him to address us. He came and described to us the excavations that had been made in ancient Athens. There was present an old gentleman, a member of our club who had begun to look towards things in the closing years of his life with somewhat of an earnestness that is not common to us, when, like Hartwell, we claim not to be Methuselahs. When the professor was through, old Dr. Miner got up and said, "Mr. Chairman, I want to say that I have listened here with the greatest interest to the picturesque descriptions of the professor. I saw him digging the columns and the plinths and the broken pieces of statuary out of the hills of Athens. I saw him loading them on the carts. I saw him taking them with great care in the boxes, and placing them upon the steamer. And I saw him after his ten years, sailing homeward. I imagined him coming in sight of the Statue of Liberty in our harbor. And as the newspaper men came aboard and threw the latest New York prints there, and I saw him reading about the increase of political graft and crime; as I saw him read of the disorders that besiege our domestic institutions; as I saw him read some of the wailings of the politicians at the increase of foes from within, I imagined I saw him throwing the paper down on the floor, and saying to himself, 'Where the hell have I been wasting my time for the last ten years.'"

Of course, the hospitality of the club immediately asserted itself and friendly hands reached to the coat tails of this, our ancient orator, and got him down. But after it was over, one after another of the members of this University Club came to him and said to him, "Doctor, you hit the nail on the head."

The question is not now for the educated university man,

"What can I do to collect pieces of broken ruins? What can I do to encourage the study of a literature and a history that has been dead for thousands of years? What can I do for leisure? But, 'What can I do for this land of mine which now needs all the intelligence and all the industry that intelligent people can direct to it?' "

You know we are tremendously influenced by tradition, and we are inclined to favor by what we have become accustomed to do. If we have spent four years in high school and four years in the University in the study of ancient languages, and have prepared ourselves to teach them, it is asking us a good deal to waste our time by teaching something that is more modern and more urgent, and yet that it what they are asking us to do. If we can show that the study of Caesar's commentaries and Cicero's orations and Virgil's poetry are the things that can best be used to direct the intelligence of the youth of the land more directly toward civic duty than any other subject can do, then in God's name let us go on teaching the campaigns of Caesar. But if a look at the field shows that the cultivation of these civic virtues which Hartwell has described to you, a willingness and a desire to participate in our public life, a willingness to perform our duty of going to the polls and taking part in the selection of the candidates for office, if that can be taught in some other way by some other subject better than that which we have in the course of study, there is no question as to the duty of the managers of schools to put those things in and to discard other things which the experience of time has shown to be less valuable.

What is it that the State of Pennsylvania under Finegan, and the State of Massachusetts under Smith and other states and counties and communities are urging upon us as the preparation for citizenship? It is the study which Thomas Jefferson had in mind when he said, "The purpose of public education ought to be to inform us what is going on in the world now, and to give us a desire to make our part of it go on right." There are the two ideas that Hartwell emphasized to you—the idea of information and the idea of the use of it, the idea of intelligence and the idea of desiring to use that intelligence for the common good.

In Pennsylvania, when they passed the law under Dr. Finegan requiring every grade of school which receives public money, from the kindergarten up through the high school and the State university, to devote an adequate amount of time day by day and year by year to the study of the preservation of our democracy, they then compelled us to do what we realize it is our duty to do, that is to aim directly, not indirectly through the campaigns of Caesar or the refinements of grammar or the ablative absolute, at the specific service for which we are drawing our wages.

If you examine that course in civic service in the Pennsylvania schools, you will find it brings, suited to the age of the children in the various grades of the school, the idea of their duty and the opportunity for practising it, not for their own advantage, but for the benefit of the town and the community which supports them. A curious thing is that in some localities the people who ought to be most seduously advocating this sort of course, the school men are the people who opposed it. The dear old State of New Jersey which gives the largest amount of payment for school service passed a law requiring that the Constitution of the United States, its origin, its purpose, our duty towards it, be taught in all the public schools. The teachers and superintendents of New Jersey in their State convention made speech after speech opposing the interference of laymen with the professional service of the schools. "Can you beat it?"

Who owns the schools? The schoolmaster? Who has kept the schools back from rendering this public service? The citizens? Maybe and maybe not. Who gave Horace Mann, the statesman, the improver of educational service, the most trouble, the most opposition? We did. We schoolmasters are the persons who have opposed from the beginning of the nation until now the American Revolution in the public schools. As a result, we have lost a good deal of the enthusiasm, belief, and confidence of the ordinary citizen. He is unable to see how our isolation, how our preparation for leisure, our advocacy of a culture—a great part of which is never used after one gets out of the school —comports with the idea of a public support of all people for the benefit of the entire state.

You remember what Guizot said to James Russel Lowell. Guizot and Lowell were talking about the American Republic. Guizot said to Lowell, "How long do you expect your republic to last?" Lowell answered him thoughtfully, "It will last as long as the ideals of the founders are realized." The ideals of the founders were that there should grow up on this soil a finer civilization than had ever yet appeared even in ancient Athens, and that it should be a civilization based on the Christian idea of the brotherhood of all men under one Father: no kings, no castes, but equality of all in their rights to life, liberty, and happiness, a nation of rulers, a democracy in which the people, civilized, intelligent, fraternal, patriotic, rule. The faith of our fathers was unbounded in the belief that by means of free and universal education this great desire would be realized. Were they to traverse one end of Ohio to the other today, their disappointment in the result of public education must be grievous indeed, and so in Pennsylvania, and so in New York. And so in every state in the country, for the reason that the Revolution never took with the schoolmaster until the year 1914. When the appeal of our President came to the schools, "We implore you to direct your attention to your main purpose, a cultivation of civic virtue," we began to do something, we began to introduce more and more into our schools the study of our politics. We are getting to the point where a city like Columbus has no hesitation in its high schools in studying the politics of Columbus. Who is the boss of the elections in Columbus and how does he manage it? He manages it by the fact that the small number of persons who go to vote could be counted beforehand and can be controlled.

Whose fault is it that Columbus, that Cincinnati, that Dayton, that Cleveland, that any large American city is controlled by an invisible political monarchy, and not by the democracy which seems to control it? It is the fault of the persons who stay away from the polls. Who are they mostly? The educated, school-trained people. Whose fault is that? Mine, yours, the fault of the men and women who run the public schools.

Now, put that in your calumet and smoke it.

AMERICAN AND EUROPEAN HISTORY

G. W. KNIGHT, Ohio State University, Presiding

STANDARDIZING INSTRUCTION IN HIGH-SCHOOL HISTORY

R. M. TRYON
University of Chicago

The standardization contemplated in this discussion is for the educational practitioner. It is proposed for the sake of better history teaching tomorrow, next week, and throughout the year. Generally speaking, it is concerned with standardization of: (1) a general organization of the field for teaching purposes; (2) the knowledge of dates and events; (3) the knowledge and identification of people; (4) the drawing of maps; and (5) the general method of procedure.

Inasmuch as this is an abstract and not a fully developed article, space permits but a brief consideration of the foregoing lines of standardization. Let us first consider the first one under two heads, the prerequisites of a good organization of history for teaching purposes and a proposed organization of the American field for the high-school level.

The prerequisites are concerned with the name, number, and the date boundary of the main division of the field. The name of a division should suggest its outstanding characteristics. In other words, the name of the division must tell what is to be emphasized in teaching it. The names of the various divisions in a field must also be coordinate both in form and in content. This type of coordination will necessitate that the main divisions themselves be coordinate one with the other. For example, one division could not be named "The Middle Ages," and another, "Medieval Civilization," because the periods of history suggested by these expressions are identical in scope but not coordinate. The two might be combined into the expression "Civilization During the Middle Ages."

The number and the date boundary of the large divisions are

closely related to the name. If a division is properly named, its length is at the same time approximately fixed. This fact is illustrated above in the name "Civilization During the Middle Ages." If one decides to use this name for the period commonly known as the Middle Ages, one has at the same time settled the matter of approximate date boundaries.

Ideally the number of divisions would be determined by the significant developments that took place during the time covered by the entire course. Exigencies of administration and method of procedure sometimes determine this matter for the teacher. Where, however, the number of divisions is not determined by something over which the history teacher has no control, there are certain important considerations to be faced before the matter can be settled. First, the content of these divisions should stand out clearly in the mind of each pupil on completing the course. They are to be thought of as the frame-work of an historical structure built during the year by each member of the class. Regarded in this way, there is, however, a grave danger of handicapping the student with a large number of topics. On the other hand, if the name is to be the key that unlocks the historical mysteries of the period for the student, the number of divisions should not be too small because of the perplexities that might be encountered in finding names sufficiently specific to be of service to the "learner."

Another consideration which must be confronted in deciding upon the number of main divisions is the subsequent teaching use one is to make of them. If the general organization contemplated here is well done, it at once becomes the foundation stone on which all the course is built. By it chronology is kept straight, historical personages are located in time, maps worth making are based on it, and the general "overview" of the whole field is simply an elaboration of it.

The following general organization of American history purports to conform to the foregoing prerequisites.

1. Introductory — Factors Affecting Early American History
2. Discovery, Exploration, and Conquest, 1492-1607
3. Colonization and the Struggle for Supremacy in North America, 1607-1763

4. Revolution and the Establishment of the American Nation, 1763-1789
5. Nationalism and Democracy, 1789-1829
6. Expansion and Conflict, 1829-1865
7. Reconstruction and Consolidation, 1865-1897
8. National Expansion and the New Democracy, 1897 to present

Inasmuch as the time and personal elements in history are of prime importance, a good deal of the right kind of attention should be given to dates, events, and to historical personages. Before beginning his course in any field of high-school history the teacher should make a list of date-events worth remembering and a list of persons worth knowing and identifying. There are several ways of making these two lists. For example, one could make use of the following lists of date-events, and persons.

1. Date-events and persons found in textbooks
2. Lists proposed by historians
3. Lists found in syllabi
4. Lists made up from current literature
5. Lists made by organized committees
6. Lists proposed by teachers in the field

If all of the foregoing were at hand, a teacher of American history could make a list of persons and date-events of which he would have reason to be proud. In the absence of most of these, he will have to rely on the lists in the text or in the syllabus, if perchance either contains any.

In standardizing maps to be made, the teacher will find less material than exists in the matter of date-events and personages. About all that the individual teacher can do is to think through each main division of the course and decide upon the minimum amount of map work necessary to make the historical geography clear. The number of individual maps need not to be large. On the average one for each main division is enough. These should be carefully and accurately named, inasmuch as they are to be so mastered by each pupil that they can be reproduced at any subsequent date. The following list illustrates what is contemplated here:

1. North America North of Mexico. Physical Features and Indians
2. Discovery, Exploration, and Conquest
3. Progress of Settlement to 1754

4. North America North of Mexico in 1763
5. United States in 1790
6. Progressive Territorial Map of U. S. to 1853
7. Admission of States and Status of Slavery to 1860
8. United States and Her Possessions Today

It may seem foolhardy to some people for one to propose the standardization of a general method of procedure in American history for the senior high-school level. For those who already have an efficient method, such a proposal is obviously not needed. In the writer's judgment there are few and not many of these. Those who are entering the field as neophytes are offered the following by way of a general method of procedure.

The first thing necessary is to get the main divisions of the field before the class. This can be done inductively with the textbook in the hands of the students. If the textbook has a general organization, this can be discussed and a tentative division proposed. In the course of a week or so the final organization can be determined along with specific names and date boundaries for each main part.

The second step is to gather in story form the main trend of the history contained in each large division. In most cases it will be better for the teacher to tell this story to the class. It can be told in sections from day to day, accompanied by a retelling from the members of the class as their part of the advance lesson. When each pupil is able to tell the story from beginning to end, the next step in the general method of procedure may be taken. This concerns the organization of each main division, and ought to be formed in about the same way as the general organization. The outline thus worked out, as well as all work previously done, should be placed in the permanent notebook. On completing the first teaching division of the subject, the next one should be taken up and treated similarly. Before leaving any particular division, however, the class should devote some time to reviewing it as a whole, in the light of all that has been learned about it. Such a review will include listing and learning, if not previously done, the date-events to be remembered, and the personages to be known which fall within the division. It will also include a review of

the main features of the map that has been made during the study of the division.

The foregoing is, of course, not the only general method of procedure worth using. Its chief asset is that it is an excellent way to put across all of the phases of standardization previously mentioned. The writer knows of no other way whereby that which is contemplated in the phases of standardization, one, two, three and four, can be done so well.

ART

J. R. Hopkins, Ohio State University, Presiding

VISUAL INSTRUCTION

Alfred Abrams
University of the State of New York, Albany

Education is measured by experience and depends upon mental reaction to contacts with things and people. The school gives too few such contacts—intellectual, emotional, and volitional. There is too exclusive use of language expression where language has little content for pupils. There is difficulty in bringing into the schoolroom objective material but pictorial representations of essential aspects of geography, art, science, and history are excellent substitutes. They make observation, the basis of learning, possible. They may be used to arouse interest, secure attention, guide judgment, stimulate thought, and give practice in discussion.

But there must be much more than looking at pictures. The objective facts of size, form, position, color, and motion must be definitely read and interpreted. Visualization means the formation of mental pictures for which physical pictures are only a means; visualization is always individual. Showing pictures may secure only involuntary attention and may fail to produce educational results. They offer large advantages but must be used with a clear insight into their purposes and special value. Their use requires more rather than less effort for both teacher and pupil, but properly employed they yield superior results.

Mere information is but a small part of education and for this pictures have little advantage over language. They offer the means of presenting concretely a wide range of practical problems. It is this concreteness that constitutes their chief merit.

Imagination, judgment, and reasoning are all dependent ultimately upon perception through observation and it was further shown that there can be no mental growth without visualization, that mere presentation is insufficient. What counts most is the mental reaction of the pupil.

Stress was laid upon the necessity of establishing proper standards of picture expression—truthfulness, authenticity, expressiveness, quality, and attractiveness. Language expression has been standardized. We are only beginning to judge picture expression critically. Pictures may be used ineffectually, in the wrong place or too many at one time but there is at present no danger of using them too much. It was pointed out that pictures are to be read in much the same sense as language.

The screen picture is the best form for classroom use, for the activity of the whole class can be directed by means of it. Book illustrations and various forms of prints are useful only for *individual* study. The educational value of illustrated lectures and motion pictures in an auditorium is relatively small and amounts to little more than entertainment. The place for visual instruction in school is in the classroom, where chiefly the course of study is carried out, and it should be systematic.

Pictures are valuable chiefly for first presentation of topics rather than for review, because the purpose of review is not merely the refreshing of memory but rather the grouping into insignificant relationships the ideas already acquired and the formation of general notions. For review language expression is better adapted.

It is important to determine when in any subject and with any class picture expression can begin to give way to a more exclusive use of language. As soon as language expression has content for pupils, it should be the main dependence, and for certain purposes pictures are wholly inadequate, such as the expression of general truth, motives for action, and ideals.

The work of the New York State Department of Education in the field of visual instruction for the past thirty-six years was briefly stated and the following summary given of what such a state service can accomplish.

1. The State Department of Education can work out and gradually establish much needed standards of picture expression in respect to truthfulness, authenticity, expressiveness, quality and attractiveness, standards that one does not generally find met in combination in commercially prepared pictures.

2. It can institute and establish a sound technique of organizing, classifying, filing, and distributing visual aids on a large and comprehensive scale. It cannot be expected that smaller school units generally will succeed in so doing. Larger cities might do so, but can to better advantage rely upon a central bureau and avoid much duplication of labor and expense. For small communities an adequate local collection successfully managed is wholly impracticable.

3. Museums, business concerns, and individuals controlling objects of large educational value will grant permission to a state bureau for making photographic negatives when they feel compelled to deny such privileges to many separate institutions.

4. Negatives are the basis of a collection of slides, films, or prints. They constitute the chief element of cost. A state bureau can better afford to procure negatives because of the vastly larger number of positives made from them. Have in mind what has been said to the effect that a picture to be projected upon a screen is used for one class exercise and is idle the remainder of the years except as it is needed for another class. A state bureau can keep a picture in circulation throughout the year, hence a large financial advantage.

5. A particular educational institution might employ persons of sufficient scholarship and technical knowledge of pictures to assemble a satisfactory collection, but a state bureau can do this once for all for many institutions. The mere act of distributing is largely a matter of clerical labor.

6. A central bureau can do very much toward creating an understanding of the special value of visual presentation, can develop a correct method of using visual aids for instruction, and can carry out rules of service that will largely insure the effective use of picture expression. Without such guidance some teachers will work out the educational problems for themselves, but more of them will defeat the ends of education by an unintelligent employment of it.

SHALL OHIO HAVE A DEPARTMENT OF VISUAL EDUCATION

Otto F. Ege
The Cleveland School of Art, Cleveland

Our thoughts, emotions, and actions are largely determined by the pictures we see. Messages conveyed by pictures are more forceful and leave more lasting impressions than those conveyed by speech or print.

This psychological power of the picture has swayed mankind since the dawn of history. The Egyptian priests and pharaohs, in order to awe the public, covered the walls of the temples with bas-reliefs and paintings, depicting the greatness of the gods and themselves; the Assyrian rulers pictured in tiles their great prowess as hunters; Pericles glorified Athenian youth in the Parthenon frieze to remove objections to the spending of the accumulated wealth of the Athenian State; the Roman Emperors conscripted further legions by sculpturing the victories of the army in Triumphal Arches; and Raemaker's cartoons in the Great War were more effective in moulding public opinion than any editorial or book. Advertising is one of the largest factors in modern life. It has been formulated into five points: (1) to focus attention, (2) to interest the reader, (3) to create a desire, (4) to show that you satisfy that desire, (5) to stimulate action. In a recent number of the *Saturday Evening Post,* there were 72 full-page advertisements and 68 of them contained one illustration and 42 of them more than one. Advertisers invested in that issue $480,000 and only $20,000 was chanced in word message alone. If the adult is so impressed by pictures, we must realize the far greater power of the picture appeal to youth and childhood.

Visual Education is not a new movement or thought, nor is it an added expense to the school curriculum. New York established its department of Visual Education thirty-six years ago and found it so effective that each year it has increased its sphere of influence. Francis Galton in his volume on *Inquiries into the*

Human Faculty, written 1886, describes at length the utility of developing the visual sense. And even as early as 1692, John Locks in his essay, "Thoughts Concerning Education," states that the use of pictures is "one of the baits wholly neglected." Racine, Wisconsin in 1914, conducted a series of experiments and found Visual Education reduced the percentage of failures from 10 percent to 5 percent and that at the end of the year, the board saved $10,000 over cost of equipment by this reduced number of failures.

Visual Education is the most valuable sense training. Educators who have had experience or made contacts with the lower grades and kindergarten realize the value of sense training and the prime importance of the visual sense for arousing interest, developing enthusiasm, concentration, contemplation, and permanence of impression. If it is so successful with the mere child and the adult, why should its influence not permeate all grades.

The State Art Committee fully realizes no worker in the arts can succeed without keen powers of observation and since most people see little of the outside world, they consequently enjoy little of the beauty of nature and the arts, therefore losing one of the greatest joys of life. For educational and cultural development, Visual Education is essential.

BIOLOGICAL SCIENCE

R. C. Osburn, Ohio State University, Presiding

THE PROBLEM METHOD IN SCIENCE TEACHING

H. W. Nisonger
Ohio State University

We sometimes refer to special methods of teaching as though they were exact formulae that could be applied directly to a learning situation, as one would use a formula of mathematics in which the specific terms of a problem are substituted. If this were possible, the use of the problem method of teaching in the natural sciences would be a comparatively simple matter. But education is dynamic, it is a going concern. The two primary factors concerned in the educative process, namely, the child and his environment are constantly changing. Educational method must also change, if it is to render proper aid to the learning processes of children.

Dr. Miller in his book entitled, *Education for the Needs of Life,* says:

> The method of instruction must correspond to the method of learning employed by children, only it must represent their more adequate guidance, organization, and direction. Teaching is designed to facilitate processes that are already going on; it is not a substitute for them. Only as I can find out what these processes are can I devise a method of teaching in harmony with the real life of the pupil.

This point of view is significant because it has been the guiding principle in the development of the problem method.

In the old type of education the curriculum was the center of the educative process. Everything revolved around it, even the child. The subject matter consisted for the most part of highly organized bodies of facts and principles selected wholly from the adult point of view. The static cold-storage idea of knowledge prevailed. Method had for its function the consideration of the ways by which subject matter might be impressed upon the mind of the child. Due to the recent developments in the

fields of biology and psychology, and to the magnetic influence of Dr. John Dewey and others, the center of educational thought is gradually shifting from the curriculum to the child. The dominant questions at present are: What is the nature of the child? What are his interests? And, how does learning take place under normal conditions?

Self-activity or the acquisition of meaning, "the enrichment, reconstruction and development of experience," are recognized as fundamental in the school life of the child. Educational method is regarded as a way of gaining experience. Thinking is the utilization of this experience for the sake of making new adjustments. The teacher's function is to select these experiences and to guide, direct, and control them with reference to the highest efficiency. Training children to think has come to be recognized as the chief business of the school.

According to Dewey the problem is the normal stimulus to thinking. He says:

> To say that thinking occurs with reference to situations which are still going on and incomplete, is to say that thinking occurs when things are uncertain, doubtful, or problematic. Only what is finished or completed is wholly assured. Where there is reflection there is suspense. The object of thinking is to help reach a conclusion, to project a possible termination on the basis of what is already given. Since the situation in which thinking occurs is a doubtful one, thinking is a process of inquiry, of looking into things, of investigation.

We realize the importance of training in problem solving when we think that life itself is a series of problems. Every intellectual effort to overcome a mental difficulty is an effort to solve a problem. The mental difficulty may be so simple that it can be overcome by a simple reaction or it may be so difficult that a careful consideration of much material is necessary for its solution.

It is not necessary, however, to include all life problems in the school experience of the child. Education is taking place wherever there is an individual in interaction with his environment, and we learn to solve many of our problems through everyday experiences. The field of biology offers a splendid opportunity for finding problems vital to the lives of everyone, old and

young alike. Some familiar ones may be found in: how plants manufacture food, the preservation of foods, the control of human diseases, the control of plant and animal pests, the provisions for a pure milk and water supply, the human body and its control, heredity, and many other equally interesting problems.

A brief description of the development of a problem in civic biology will perhaps enable me to make clear the principles involved in the problem method. Let us assume this to be a class in high-school biology in the Columbus schools. The pupils have progressed to the point where they are ready to make a detailed study of the biological phases of the city milk supply. The teacher's first task is to make this a genuine situation of experience for the class. He must know all the facts which furnish the details for a word picture of the Columbus milk situation. He must also know how to enlist the activities of pupils in developing this situation. He may begin by asking questions: Approximately how many families are there in Columbus? How much milk does the average family consume? How is this milk transported to Columbus? How many milk-distributing plants are there in the city? Name some of them. How old is the milk when it is delivered to your doorstep?

The following are some of the facts which should issue from the discussion: The city of Columbus has 50,000 families consuming approximately 75,000 quarts of fluid milk daily. This milk is produced by approximately 35,000 cows, on 2,500 different farms. The farms are scattered over thirteen counties contiguous to Columbus. The milk is assembled from these farms at country points and shipped to the distributing plants in Columbus by truck and railroad. Seventeen of these plants are engaged in receiving and bottling this milk and delivering it to the doorstep of the consumer. Some of the above facts can be secured by questioning the pupils, others may be supplied by the teacher, while still others may be secured by directing the pupils to the literature on the subject. A blackboard diagram or chart showing Columbus and the milk territory will assist in visualizing this situation. Next, the class should discuss how milk is produced and handled on the farm. The teacher may ask: What kinds

of bacteria are frequently found in milk? In what ways do bacteria get into milk? What diseases are usually transmitted through milk? How are the milk utensils usually cleaned? How long is the milk held on the farm? Where is it stored? What causes milk to sour? How are dairy utensils usually cleaned at the milk plants, etc?

It is quite possible that some of the pupils may have visited farms and can give the class all the information needed. A list of the possible ways of introducing bacteria into milk may be placed on the blackboard. Sufficient facts should be brought out to show the importance of careful handling of milk through all the steps from the producer to the consumer. The discussion should develop to the point where the pupils realize the dangers of getting milk produced by unhealthy cows, contaminated by diseased milkers, exposed to the atmosphere in dirty stables, and handled in unsanitary utensils.

Stating and defining the problem is a very important step. What is the biological problem in this situation? If the situation has developed properly, it should be evident that it is necessary for a city to take certain precautions in order to safeguard the health of its people. What has Columbus done in this matter? Someone may suggest that there are milk inspectors in the office of the City Board of Health. Are they doing this work satisfactorily? Here are 2,500 farms scattered over thirteen counties. To keep a proper check on the conditions under which milk is produced on these farms is a tremendous task. In addition there are seventeen milk plants in Columbus which must be inspected. What rules should the producers and distributors be required to follow? How can these rules be rigidly enforced and the cooperation of these people still be maintained? The pupils should realize that the situation has its economic and social as well as its biological aspects. We might well state the problem as follows: How should the city of Columbus handle the problem of milk inspection in order to safeguard the health of the people?

The pupils must next formulate procedure in solving this problem. They must first become familiar with the methods used by the Columbus Board of Health in checking these farms

and milk plants. A study of milk permits and score cards will indicate the requirements the farmer must meet. Briefly, this will lead into a study of kinds of bacteria found in milk; how bacteria get into milk; effect of temperature on the reproduction of bacteria; the purpose of cooling milk on the farm; transmission of tuberculosis; how to make the tubercular test; sterilization of utensils; care of dairy barns; pasteurization, etc. The particular points to be studied each day might be listed on the blackboard during the assignment.

The pupils are now ready to collect and organize the data. Their possible sources of information are many and varied, they include the textbook, reference books, bulletins, and board of health inspection rules and talking with people who might furnish information on this problem. The class as a whole may visit the office of the board of health, milk plants, and dairy farms, or elect some one of their number to make these visits and report his findings.

Through class discussions, conclusions should be drawn on the basis of the facts, and the validity of these conclusions carefully tested. Suppose one pupil decides that all milk delivered to Columbus should be from tuberculin tested herds. This is a fair assumption in view of the dangers of spreading tuberculosis. But is this a practical thing to do? How much milk comes from tested herds? Can farmers afford to have their herds tested, slaughter the reacters, and still sell milk at the same price? Should the consumer help pay for this loss through indemnities from public funds? Are other cities making this requirement? Are there any other effective ways of preventing the transmission of tuberculosis through milk?

The teacher should always be alert to question the pupils' conclusions in such a way that they will be compelled to evaluate all the facts very carefully. With such questioning, the pupils will very soon feel the need of more data. A further search for facts will be necessary. Pupils should also be encouraged to check each others' conclusions, on the basis of facts they have gathered.

It was indicated above that the first essential in the use of the problem method is a genuine situation of experience. Problems

are not pulled out of the air, nor do they just happen. They must develop out of life situations. They only become problems when they grow out of or are discovered within definite local situations. The milk situation in a village of 1,000 people would be very different from the one in Columbus; there the farmer would probably deliver his milk directly to the consumer. For this reason, the problem involved would be very different.

Teachers may utilize a great variety of situations out of which problems may come, such as class demonstrations, laboratory exercises, and field studies. The situation should be set up so clearly that the pupils under proper guidance will discover the problem themselves. It is essential that the problem be stated clearly, because this furnishes the stimulus or motive for further study. To get every pupil to feel the intellectual challenge of the problem and accept it as his own, is a difficult task.

The problem development should begin with facts and principles already familiar to the child's experience. Opportunity for new experiences should be provided step by step until the problem is solved. The psychological rather than the logical order should be used.

There are many different ways of stating problems. Many teachers prefer to state them in the form of questions. Frequently they remain questions because they present no situation which is really problematic. If problem solving means nothing more than placing how, why, or what before the ordinary statement of a general topic, it has little to contribute to the cause of good science teaching. We must always remember that problems grow out of actual situations.

Many teachers have had the impression that the merits of the problem method justified its continued use. To be sure there should be problem solving or reflective thinking in every recitation, but this does not mean that all school experience should consist of very carefully working out the solution to big problems, such as that illustrated by the Columbus milk supply. It should be used only when this represents the normal method of learning.

The educational value of a method is not an inherent quality. Many teachers have assumed that if they adopted certain methods

of teaching their success was assured. This is far from the truth. Any method may be made mechanical in the hands of a teacher who does not understand the nature of the educative process. Much of our science teaching has been unproductive so far as the fruitful experiences of children are concerned. Especially is this true of the laboratory work.

In solving the Columbus milk problem referred to above, the pupils are not confronted with a problem and then given a ready-made solution. The assignment was not made by saying: "Our next lesson will be from page 178 to 184 in the textbook. Be sure and have a good lesson tomorrow." But a situation is developed and pupils sent to sources of information seeking answers to definite questions. They are not simply given page assignments and asked to expose themselves to a definite amount of reading material. They are not beginning their study by learning a highly organized body of facts and principles. They are face to face with a problematic situation which develops an inquiring, searching attitude of mind. This furnishes them a motive for their activities, and a purpose to direct their work. Any method of teaching which secures this attitude of mind on the part of children will bring results.

DEMONSTRATION OF SOME METHODS OF HANDLING PROBLEMS IN BIOLOGY

W. M. Barrows
Ohio State University

This is an actual demonstration of two simple biological experiments. The object of this method of procedure is to show as graphically as possible just what such a demonstration can accomplish in producing a problem in the students' minds, in stimulating the students' interest, and in furnishing the data from which they can draw conclusions, building up in this way an understanding of two fundamental biological principles.

During the first experiment a young rat is put into a bottle containing pure oxygen. In this bottle is a sponge soaked in

barium hydroxide. From the stopper a single glass tube leads outward and downward into a dish of colored fluid. The rat does not burn up in pure oxygen as most students have been taught to expect. The colored fluid rises gradually in the tube showing that oxygen is being used. The sponge squeezed out after the experiment is finished shows that barium carbonate is present in it. This proves that CO_2 is produced. The rat shows no results of stimulation, which proves that oxygen does not stimulate respiration or unusual activity in the animal.

The second experiment is demonstrated by an inverted, stoppered, one-gallon bottle, half full of water which contains a small goldfish and some algae. It has remained as it is for some weeks in a window with north light. Evidently the fish and algae in a proper light provide each other with the necessary materials which are used in the life processes of each.

The advantages of such simple biological experiments are:

1. Such demonstrations interest the student considerably, because there is something alive and something "doing."

2. They form a problem which challenges a student's attention.

3. The student can think while the teacher carries out the demonstration, relieving the former of the details of manipulation.

4. Such demonstrations can take the place of laboratory work which is gradually losing ground in our crowded, poorly equipped schools.

5. If the teacher prefaces these demonstrations with others which show the properties of O_2 and CO_2 *and does not tell what is happening or what should happen,* these demonstrations are examples of teaching by the problem method in which the student *draws his own conclusions from the actual data.* In other words he learns to think for himself from first-hand information.

6. These demonstrations require only common materials found in the average high school.

7. They leave the opportunity open for the better or more interested pupils to help in the setting up or taking care of the

materials and apparatus, thus saving the teacher's time to some extent.

8. After these demonstrations each student can make a report in which diagrams show exactly what has happened.

9. The results of these experiments can be used to explain the results of photosynthesis and respiration in the world and to introduce such topics as the foods and the interdependence of animals and plants.

PROBLEMS IN THE PROBLEM METHOD OF TEACHING

HOMER C. SAMPSON
Ohio State University

My object is to open discussion by citing some of the experiences I have had and certain tentative conclusions reached while teaching students botany as their first biological subject.

Students are unable at first to see problems in biological subjects involving processes and behavior in general, because of their credulous acceptance of the crude teleology, vitalism, and anthropomorphism of traditional lore as reliable bases for arriving at conclusions and explanations of biological phenomena. To correct this unfortunate attitude of mind it is necessary early in the elementary biological course to plan observations, experiments, and discussions with the idea of acquainting students with the significance of recognizing cause and effect relations in biological processes, of evaluating ideas on the basis of thoroughly tested data, and of accumulating information for definite purposes. I wish to emphasize the importance of teaching students to make *use of the scientific method in biology* in contrast to the older plea that biology be used to teach the scientific method. Incidentally this use of the scientific method may tend to prevent students temporarily accumulating information of no significance to them. When students see that facts are as essential for the explanation of life phenomena as they are for the explanation of chemical and physical phenomena of everyday life, they may be taught biology

by the problem method. This first step is necessary in order that an inquiring open-minded attitude toward problem situations may be developed, and that teleological guessing may be replaced by a desire to know the underlying casual relations.

Teaching by the problem method requires more training, ability, and labor on the part of the teacher than other methods of teaching. Textbooks and laboratory manuals may help much if they are organized and written in such form that the teacher may make use of the problem method when desirable. The necessary interest on the part of the student, however, is more certainly aroused in a give-and-take discussion where the teacher is able to take advantage of the students' statements and answers. This last an author cannot do when he attempts to set up problem situations on the printed page.

The teacher must, therefore, know his science and its applications sufficiently well to be able to set up problem situations of interest and significance to his particular class of students. He must also be able to evaluate the problems raised by students during discussion. Have they been solved? Can they be solved at present? What are the approved methods of solving such problems? Are the students able to solve them? Will they be able to solve them later in the course?

The problem always before the teacher is the problem of approach to any given topic or idea. Among many possibilities which is the best? If the problem method is chosen, there are in general two types of problem situations that may be set up: (1) situations that bring up problems for the solution of which the student must acquire new data, and (2) situations that bring up problems for the solution of which the student must exercise selective recall and evaluation of facts already learned.

If the teacher is to present a course in biology as an organized and connected story, he must decide which facts and ideas are best presented by the first type of problem situation and which by the second type. He meets the problem not only of setting up problem situations but of organizing his whole course so that the student may be led from relatively simple situations to the more complex situations. The solution of some problems, such

as evolution or the casual relation of the environment to the relative amount of root and top growth of a plant, requires too many data to be presented by the first type of problem situation. These problems are most successfully presented by the second type after students have acquired the requisite data through the solution of more limited problems. Problems must be sufficiently limited so that the student begins to get results before becoming weary of collecting data.

Several concrete examples were used to illustrate the points outlined above. Four different ways of presenting the manufacture of foods by plants as a problem situation of the first type were outlined in detail: Wandering Jew grown in sunlight and shade, a microcosm, energy used by man, and plants grown under various environmental conditions some of which indirectly caused starvation.

The concepts of evolution are used to illustrate a problem situation of the second type after students have worked out numerous facts and ideas of types and causes of variations, the principles of heredity, reproduction, geographic distribution, and fossilized organisms.

THE LOWER LIMIT OF TRAINING FOR TEACHERS IN SECONDARY BIOLOGY

B. M. Davis
Miami University

What preparation should a high-school teacher have before being permitted to teach such courses in biology as are now offered in a first-grade high school of the State?

The State answers this question through the minimum requirements necessary to secure a certificate to teach biology in any of its high schools after January, 1924. Two kinds of certificates are issued, one by examination where the applicant has had at least two years of college work above a first-grade high school; the other may be issued to a graduate of an approved college

one of thirty-six approved by the State Department of Education.

To obtain a certificate of the first kind the applicant must pass an examination in physiology, botany, zoology, agriculture, and general science.

To obtain a certificate of the second kind, known as provisional certificate, the applicant must have taken work in education equivalent to twenty-four semester hours, of which eighteen hours are prescribed, including three hours of practice teaching. The certificate permits the holder to teach any subject in a high school in any district in the State. "To encourage the holder's preparation, majors and minors—other than education—of the holder are named in the provisional certificate." A major refers to "a subject in which one has eighteen hours of collegiate credit," and a minor, "a subject in which one has ten hours collegiate credit." Thus eighteen or ten hours collegiate credit in biology would represent the lower limit of preparation to teach that science. This limit is merely implied, however, not required. There is nothing to prevent a holder of a provisional certificate from attempting to teach biology with no collegiate preparation in that subject whatsoever.

Aside from presenting the lower limits as set by the State as a preparation for teaching biology in our secondary schools, the purpose of this paper is to present for discussion some aspects of biological training that should be reasonably expected of teachers of secondary biology.

The training should prepare a teacher to reach the objectives or aims of biological instruction in high schools. Unfortunately these objectives are not well defined. It is obvious that some set of objectives must be in mind in order to discuss the limit of a teacher's preparation to teach the subject. The following items are presented as a tentative list of objectives toward which biology may be directed:

1. Better habits of living, especially referring to the conservation of health
2. A scientific method of acquiring facts, particularly scientific habits of thought
3. An interest in living things

4. An appreciation of science in reading, in the work of others, and as a means of protection
5. A knowledge of some of the most important principles of biology

Some consideration should also be given to such limitations of instruction as the age of the pupils, their natural interests, and their environment with reference to forms of life which may be easily reached and studied.

The teacher should also have an adequate knowledge of the materials of instruction to be used with reference to the objectives and the limitations already suggested.

This presupposes on the part of the teacher a considerable range of knowledge regarding plants and animals in order that he be able to lead the pupils to understand and appreciate the life about them. This should mean more than being able to name the more common forms—such as the common trees, birds, etc. The teacher should know and be able to apply by way of interpretation the primary essentials of green plant life, non-green plant life, and animal life to the various forms with which the pupils most often come into contact or may be able to find with little effort.

The great fact of the dependence of green plants upon sunlight, water, and temperature goes far toward helping to explain the presence of countless forms of green plants. When we know that all these plants make their own food beginning with a simple carbohydrate, and that the machine for making this initial substance is the chloroplast, using the sun's energy for power, and water and carbon dioxide as raw materials, we have before us the problem confronting each of these plants. It is a life or death matter. Some do it one way and some another; hence the variety.

For example the pond scum gets its light by floating on the water, and its raw materials by diffusion. The tree on the other hand lifts its leaves which hold its chloroplasts up into the sunshine. But to get water it must spread its root hairs through the soil by means of an extensive root system, and then draw the water in through its hairs. Both the pond scum and the trees are doing the same thing but doing it differently.

In a similar fashion it is possible by use of fundamental prin-

ciples of life to carry an interpretation to other forms, so that each plant and each animal may be recognized as a living thing trying to live its life in its own way.

NOTE.—The address, "The Importance of Science in High-School Education," by M. A. Bigelow, Teachers' College, Columbia University, given before the joint session of the Biological and Non-Biological Sections will be found on page 315.

CITY SUPERINTENDENTS

PAUL C. STETSON, Superintendent of Schools, Dayton, Presiding

REPORTS OF COMMITTEES

PERSONNEL OF THE COMMITTEES:

Economies in School-Building Construction

A. C. ELDREDGE, Assistant Superintendent of Schools, Cleveland, *Chairman*
B. O. SKINNER, Superintendent of Schools, Marietta
H. B. TURNER, Superintendent of Schools, Warren

Economies to Be Effected in the Supervisory and Administrative Organization

C. R. REED, Superintendent of Schools, Akron, *Chairman*
H. D. BIXBY, Assistant Superintendent of Schools, Cleveland
E. D. ROBERTS, Assistant Superintendent of Schools, Cincinnati

Economies to Be Effected in the Reorganization of the Various Courses of Study

R. C. MASTON, Superintendent of Schools, Martins Ferry, *Chairman*
J. R. PATTERSON, Superintendent of Schools, Bucyrus
U. L. LIGHT, Superintendent of Schools, Barberton

Economies to Be Effected by the Reorganization of the Teaching Load in the High School

F. J. PROUT, Superintendent of Schools, Sandusky, *Chairman*
R. J. KIEFER, Superintendent of Schools, Niles
A. W. ELLIOTT, Superintendent of Schools, Mt. Vernon

The Outlining of Some Plan Whereby Adequate Financial Support Through Taxation May Be Assured to the Public Schools

G. C. DIETRICH, Superintendent of Schools, Piqua, *Chairman*
W. A. WALLS, Superintendent of Schools, Kent
E. V. BOWERS, Superintendent of Schools, Galion

ECONOMIES IN SCHOOL-BUILDING CONSTRUCTION

The Committee assigned to the study of Economies in School-Building Construction desire to make the following report:

Pursuant to the request of the general chairman the committee sent letters to a large number of superintendents throughout Ohio asking for information relative to economies in cost of school-building construction. From these various sources and personal investigation we have found the following contributing factors to high cost of building:

1. The increased cost of materials during recent years
2. The increased cost of labor during and since the war
3. Experimentation with more elaborate heating and ventilating systems
4. Unnecessary and unreasonable requirements by the State Building Code as to fire protection and toilet facilities
5. In a few cases, expensive and unnecessary ornamentation of buildings and expensive interior finish for corridors, shower-rooms, locker-rooms, etc.
6. The introduction of greatly increased facilities for both school and community use
7. The failure of architects, so far, to produce efficient school buildings with a high ratio of classroom and usable space to cubical contents
8. Failure of architects to include in specifications all items so that subsidiary contracts are unavoidable

There appears to be no remedy for high costs of materials although this seems to vary greatly in different sections of the state. Usually in the larger cities materials cost much more than in the smaller ones, an apparent contradiction of the principle that buying in larger quantities insures a decrease in cost.

The committee has no suggestion to make relative to labor costs. Labor costs vary greatly in different parts of the state, as does the amount of work secured per hour or day from different tradesmen in the same trade. If there could be established a code of ethics which would always insure an honest day's work for an honest day's pay, it might prove to be as great a boon to the employee as it should be to the employer, while it would doubtless insure a considerable saving to the owner.

The prevalent feeling seems to be that requirements in heating

and ventilating are responsible for a certain percentage of the increased cost, a part of which at least could be eliminated without detriment to either health or safety. We are told on good authority that there is more guessing and exploitation in this branch than in any other single branch of building construction.

There is a universal and definite belief that costs could be generally decreased through a modification of the unnecessary and unreasonable requirements placed upon the erection of school buildings by the State Building Code and the Department of Inspection of Buildings in the State Department of Safety.

It is evident from recent investigations that the requirements of the State Code were not a result of either investigation or careful judgment. But rather could only be the result of either a bad guess or a deliberate attempt of unscrupulous interested organizations who, taking advantage of the frenzied populace after the horrors of the Collinwood fire, were willing to capitalize the loss of children's lives and prey upon the ignorance of a gullible public for monetary profit.

From inquiry made of a large number of architects, builders, practical engineers in charge of large buildings as custodians, superintendents, and principals, the almost unanimous opinion as to the State Code requirement of fire doors in corridors of fireproof buildings, except where they are installed between the basements and the first floor, as a smoke screen, is that they are not only useless but are a positive menace to the protection of the children. They not only greatly impede the egress from the building but are the cause of blockades and actual "pile-ups" of children at these points during fire drills.

It is plain that an economic plan for the construction of school buildings, with the greatest possible economy of classroom space or useable space as compared with cubical contents, has not been produced. With office-building owners demanding the maximum available feet of office space as compared with floor acres, with hotel owners demanding the highest number of guest rooms to total area, the days of the advertising school architect, who does business on a boast of everything but amount of available classroom or useable space, should be numbered.

For pupil cost of building is an item that if published would tend to decrease extravagance in construction and increase space utility.

In certain buildings there has been much money spent on expensive showers for girls and elaborate dressing-rooms and locker-rooms which are seldom used. The question of the use of such facilities should be determined before the equipment is installed. A glaring indictment of the authors of the State Building Code may be shown in the finding of a study conducted in Cleveland one year ago by the chairman of this committee to determine the utility of toilets for boys and girls in the senior and junior high schools.

Instructions were sent to the principals of each of our eighteen regular senior and junior high schools asking that an organization be set up in each building requiring a check on the use of all toilets during every intermission of classes throughout the day beginning with the convening period in the morning and closing with the dismissal of the last regular period in the afternoon. This survey covered two full days in different weeks and different days of the week. The report called for the following data:

1. Enrollment of the school. .....Boys .....Girls .....Total
2. Number of toilets in the building for boys....., for girls.....
3. Maximum number in use at each period by boys....., by girls.....
4. Minimum number in use at each period by boys....., by girls.....
5. Average number in use at each period by boys....., by girls.....

After the two days' trial and careful checking, we found that the results of the two days were almost identical, the variations being very slight. We found greatly to our surprise that there was only slight variation in the use of girls' toilets over boys' toilets.

In the 18 schools studied there were 346 boys' toilets and 418 toilets for girls, a total of 764, with a total daily attendance of 12,691 boys and 12,182 girls or a total attendance of 24,651. Instead, therefore, of having one toilet for each 25 boys as provided in the code we actually have one for each 36 boys. And instead of

having one toilet for each 15 girls as required by law we have one toilet for each 29.6 girls.

We found that the largest number of toilets in use by the boys at any one time was 204 of the 346 provided, and that the average number in use for all periods was 114. From the reports on the use of girls' toilets we found that the number in use at any one time 234 of the 418 provided, while the average number for all periods was 133. In other words this means that the maximum use of boys' toilets was 204 of the 346 provided for the 12,469 boys, or the use of one toilet for each 61 boys, and an average use of one for each 109 boys enrolled. As for the use of toilets by the girls the report shows that the maximum use amounted to 234 of the 418 or the use of one toilet for each 52 girls, while the average use for all periods was one toilet for each 92 girls.

Combining these reports in terms of maximum accommodations for a school of 1,200 equally divided between boys and girls, it would mean that there should be provided 10 toilets for boys and 12 for girls or a total of 22 toilets, and if based on average accommodations there should be provided 6 toilets for boys and 7 for girls or a total of 13.

While if the state code were complied with there should be provided 24 toilets for boys and 40 for girls, a total of 64. This means that the state code requires 140 percent more toilets for boys than the maximum use shows, and 233⅓ percent more for girls than the maximum use shows, and 300 percent in excess of average needs for boys and 471 percent in excess of average needs for girls.

There is one building in Cleveland which last year had 700 boys enrolled and there are provided 6 boys' toilets. It was because of a check up on this toilet-room for several successive periods that the chairman of this committee undertook the survey of all the senior and junior high schools.

A check up on a large number of elementary schools by the architectural department of the Cleveland schools shows that, at the maximum use one toilet for each 30 girls and one toilet for each 50 boys, and one urinal for each 30 boys would be more than ample and that by a little organization in the use of these

accommodations the number of children could be greatly increased.

These figures the committee feels are significant because this is probably the first real study which has been made of toilet accommodations in the schools of the state or so far as we are able to discover in the country. It shows a chance for a considerable saving in the cost of plumbing and fixtures for school toilets as well as a saving in floor space used in toilet-rooms.

If the total expended for subsidiary contracts for each building were displayed in a statement it oftentimes would be an item large enough to challenge the interest of those who must pay the bills if not sufficient to cause the chagrin of the architect who allowed these extra charges.

It seems that with all the thought, effort, and money that had been expended upon plans we soon should arrive at a type of plans and specifications which would decrease to a real minimum subsidiary contracts and that it would soon be known which architects are able to produce good buildings without "extras."

Recommendations

We recommend that the building code be changed as follows:

First, that no fireproof doors shall be required in the corridors and stairways of fireproof buildings except where the heating plant is in the basement, there may be fireproof doors between the basement and the first floor where the heating plant is outside of the school building, there may be fire doors in connecting passageways between the heating plant and the school building. The purpose in both these cases being that the doors act as smoke screens.

Second, that no fire-escapes other than the regular stairways be required in connection with a fireproof building.

Third, that it be made permissible under the law to experiment with cheaper methods of ventilation consistent with conservation of health with the hope that not only a cheaper system but also a more satisfactory system may be evolved.

Fourth, that the present regulations regarding toilets be revised to provide that not more than one toilet shall be required in elementary schools for each 30 girls and one toilet for each 50 boys, and not more than one urinal shall be required for each 30 boys. While in the senior and junior high schools not more than one toilet shall be required for each 40 girls and one toilet and one urinal for each 50 boys.

Fifth, that we call upon school architects throughout the state or non-resident architects to apply the same business methods to the planning of school buildings as are now demanded of architects of office buildings, hotels, and factories, that they produce the maximum ratio of classroom or useable space to the cubical contents of the building, since up to the present time there has been generally a wanton waste of space in school-building construction.

Sixth, that we recommend for industrial departments of senior and junior high schools a shop construction of steel and brick which would furnish adequate accommodations at greatly reduced cubical cost.

Seventh, that in planning buildings architects be required to furnish a per pupil cost of buildings already built as a guaranty of economical construction under their plans.

Eighth, that Boards of Education in employing architects consider along with other qualifications the ability to produce efficient buildings with the minimum of subsidiary contracts.

If all of these suggestions could be realized there would result a very material saving in the cost of school buildings.

Respectfully submitted,

B. O. Skinner.
H. B. Turner.
A. C. Eldredge.

ECONOMIES TO BE EFFECTED IN THE SUPERVISORY AND ADMINISTRATIVE ORGANIZATION

EDWARD D. ROBERTS
Assistant Superintendent of Schools, Cincinnati

I am accepting the implication of the general topic of the program of this section for the purpose of the discussion, but I am not ready to admit the validity of it in practice, if such validity is to be understood as implying that the schools are costing too much. I do not believe that the schools are costing too much. Indeed I feel that the schools are not yet costing enough, if one may judge by the manner in which opportunity is offered and by the success of the appeal made by the school's offering to the children and youth for whom the opportunity is provided. There will be a constantly increasing willingness on the part of communities to add to their tax burdens in the support of public education, as they give a larger understanding of the value of the schools to society and a growing appreciation of the service rendered and the result produced.

The truth of these statements is confirmed in these words, published editorially in the *Cincinnati Times-Star* last Monday, March 31:

> Cincinnati is spending about what she should spend on her schools. The school board ought not to receive less, and it should not try to take much more, than it is now getting, of the money that is being spent. The people of Cincinnati can be confident that 100 cents out of every dollar are going for school purposes.

The discussion before this section, whether we believe our schools are costing too much or not enough, will have importance and real significance, however, if it leads us to an intelligent and constructively critical examination of our organization, our program, our building policies, our courses of study. To the subcommittee of which I am a member has been assigned the particular economies which may be effected in the supervisory and administrative organization. My own share in this assignment is a consideration of the requirements of the statutes, which prescribe specific studies for the various schools, and a discussion of

the effect of these requirements upon our supervisory and administrative organization.

An elementary school is defined as follows in Section 7648, General Code (*Ohio School Laws,* 1922, p. 332):

> An elementary school is one in which instruction and training are given in spelling, reading, writing, arithmetic, English language, English grammar and composition, geography, history of the United States, including civil government, physiology and hygiene. Nothing herein shall abridge the power of boards of education to cause instruction and training to be given in vocal music, drawing, elementary algebra, the elements of agriculture and other branches which they deem advisable for the best interests of schools under their charge.

This definition lays out in a general plan the outlines of an elementary school in our state. By the detail of its definition it prescribes the limits of our school organization. The elements named constitute the distinguishing marks of elementary schools, and they therefore determine our form of school organization and in particular fix our supervisory and administrative organization. These are the subjects to be taught, if we are to have elementary schools. For the teaching of these subjects teachers must be provided, and for the assignment, control and supervision of such teachers a suitable supervisory and administrative organization must be effected.

But the provisions of the section just quoted are still further amplified in Section 7645, General Code (*Ohio School Laws,* 1922, p. 330), which reads as follows:

> Boards of education are required to prescribe a graded course of study for all schools under their control in the branches named in Section 7648, subject to the approval of the superintendent of public instruction. The course of study mentioned in this section shall include American government and citizenship in the seventh and eighth grades. As an additional study the subject of thrift shall be taught for at least thirty minutes each week in each grade of the elementary and high schools of the state. The superintendent of public instruction shall prepare an outline for a course of study in thrift for both the elementary and the high schools of the state.

This section clearly increases the obligation imposed by the section defining the elementary schools, for it requires the prescription of a graded course of study, adds instruction in

American government and citizenship in the seventh and eighth grades, and requires that thrift be taught at least thirty minutes each week. The obvious result of these provisions is, first, the intensifying of the school organization by a grading of pupils, to justify a graded course of study; second, the limitation and specialization of the work of the teacher, who in a graded school with a graded course of study has a narrower and more specialized field of labor than in an ungraded school without a graded course of study; and third, the requiring of expert, systematic, constructive supervision of teachers doing this specialized work under a graded course of study. The addition of subjects, such as American government and citizenship and thrift, makes this supervisory need all the stronger, and if it is expected that worthy results are to be secured, absolutely precludes any consideration of a reduction of the supervisory organization.

Section 7688, General Code (*Ohio School Laws,* 1922, p 350) adds another specific duty to the schools in these words:

> Not later than April the governor of the state shall appoint and set apart one day in the spring season of each year, as a day on which those in charge of the public schools and institutions of learning under state control, or state patronage, for at least two hours must give information to the pupils and students concerning the value and interest of forests, the duty of the public to protect the birds thereof, and also for planting forest trees. Such day shall be known as Arbor Day.

The following section, 7688-I, General Code (*Ohio School Laws,* 1922, p. 350) also places upon the schools a specific obligation, as follows:

> The Friday nearest the sixteenth day of January of each year shall be set apart as a day on which those in charge of the public schools of the state shall spend at least two hours' time to carrying out a temperance-day program as prepared by the superintendent of public instruction; information relative to the history of the temperance movement and of the physiological value of temperance shall be given the pupils. Such a day shall be known as temperance day.

The latter section is supplemented by Section 7723, General Code (*Ohio School Laws,* 1922, p. 375), which prescribes:

> The nature of alcoholic drinks and other narcotics, and their effects on the human system, in connection with the various

divisions of physiology and hygiene, shall be included in the branches to be regularly taught in the common schools of the state, and in all educational institutions supported wholly, or in part, by money from the state.

And is followed by Section 7724, General Code (*Ohio School Laws,* 1922, p. 375):

Boards of education, and boards of such educational institutions shall make suitable provisions for this instruction in the schools and institutions under their respective jurisdictions, giving definite time and place therefore in the regular course of study; adopt such methods as will adapt it to the capacity of pupils in the various grades; and to corresponding classes as found in ungraded schools. The same tests for promotion shall be required in this as in other branches.

And Section 7725, General Code (*Ohio School Laws,* 1922, p. 376):

In all teachers' institutes, normal schools and teachers' training classes, hereafter established by the state, adequate time and attention shall be given to instruction in the best methods of teaching such branch. (This refers back to section 7723.)

And Section 7726, General Code (*Ohio School Laws,* 1922, p. 376):

No certificate shall be granted to any person to teach in the common schools, or in any educational institution supported by the state who does not pass a satisfactory examination on such subject, and the best methods of teaching it. (Reference is to Section 7723.)

For failure to enforce the provisions of the two sections just quoted, penalty is provided in the following language of Section 7727, General Code (*Ohio School Laws,* 1922, p. 376):

The superintendent of public instruction shall see that the provisions in the next two preceding sections relating to county teachers' institutes, and schools and classes by whatever name hereafter established for training teachers, and the examination of teachers, are carried out. Each year, he must make full report of the enforcement of such sections in connection with his annual report.

And Section 7728, General Code (*Ohio School Laws,* 1922, p. 376):

Any school official, or employee in any way concerned, in the enforcement of the next five preceding sections who wil-

fully refuses or neglects to provide for, or to give the instruction as to the nature and effect of alcoholic drinks and other narcotics, herein before required, shall forfeit and pay for each offense the sum of twenty-five dollars. Mayors, justices of the peace and probate judges shall have concurrent jurisdiction with the common pleas court to try all such offenses. All forfeitures collected hereunder must be paid into the general county school fund of the county in which it was collected.

It is obvious that these provisions of the law make increased demands upon schools and teachers, and cannot be construed to involve any diminution of the need for supervision.

An additional requirement is contained in Section 7721, General Code as revised last year (*Ohio Laws*, 110, 1923, pp. 18, ff.):

Sec. 7721. All pupils in the elementary and secondary schools of the state shall receive as part of their instruction such physical education as may be prescribed or approved by the Director of Education, and the physical education provided shall occupy not less than 100 minutes per school week. Modified courses of instruction may be provided or approved by the Director of Education for pupils unable to take the course provided for normal children. Credits and penalties shall be applied for success or failure in physical education courses as in other school subjects.

Sec. 7721-1. The superintendents of schools of all city, exempted village and county school districts, shall submit before the fifteenth day of September annually, to the Director of Education, for his approval, the courses in physical education to be pursued by these schools under their supervision or shall indicate that the course outlined by the Director of Education will be followed by the schools under their supervision. At the close of each school month a report of the amount of time devoted to physical education shall be included in the report of every school.

Sec. 7721-2. Boards of education shall, in the institution and conduct of physical education, take due knowledge of the health supervision of school children maintained by boards of health or by boards of education and shall provide for the proper coordination of such work with the work in physical education. Where the board of education has not employed a school physician, the board of health shall conduct the health examination of all school children in the health district and shall report the findings of such examination and make such recommendation to the parents or guardians as are deemed necessary for the correction of such defects as may need correction. It is provided that this act shall not be construed to require any school child to receive a medical examination or receive medical treatment whose parent or guardian objects thereto.

Sec. 7721-3. All institutions for the training of teachers in the state of Ohio shall include courses of study designed to

prepare teachers to give instruction in physical education. No state-wide certificate shall be granted after June 1, 1924, to persons who have not had such work in physical education, in college or normal school as may be required by the Director of Education.

SEC. 7721-4. After September 1, 1926, no person shall be granted a certificate or employed to teach or supervise physical education as a special subject, who does not present satisfactory evidence of having creditably completed a special course in physical education of not less than two years, or its satisfactory equivalent unless such person has served as a full-time teacher or supervisor of physical education prior to January 1, 1925. The holder of a physical education certificate may be employed to teach hygiene.

SEC. 7721-5. The Director of Education shall publish a program and a syllabus covering the several subjects and activities required in physical education and these publications shall be distributed for the use of the teachers of the state.

SEC. 7721-6. The Director of Education may appoint a supervisor of physical education to administer, supervise, and direct the varied program and activities of physical education and to promote the training of physical education, to promote cooperation with the state department of health, and with the district boards of health, to advise with boards of education and to assist the Director of Education in the performance of the various duties devolving upon him in the execution of laws relating to physical education.

SEC. 7721-7. It shall be the duty of the boards of education or other officials in charge of all schools in the state to make provision for the establishment and maintenance in their schools of the courses in physical education prescribed by Section 7721 of the General Code.

Here is a mandatory requirement for all schools which involves definite provisions in the way of organization and supervision, and which obviously makes impossible a reduction in the supervisory force.

Section 7722, General Code (*Ohio School Laws,* 1922, p. 374) makes possible marked additions to the schools and increases the need of a supervisory organization, when it permits the establishment of the following:

Any board of education may establish and maintain manual training, domestic science, and commercial departments; agricultural, industrial, vocational and trades schools, also kindergartens, in connection with the public-school system; and pay the expenses of establishing and maintaining such schools from the public-school funds, as other school expenses are paid.

Further requirement is made in the mandatory provision of Section 7724-I, General Code (*Ohio School Laws,* 1922, p. 375):

> It shall be the duty of each teacher in the public schools of the state to devote not less than thirty minutes in each month, during the time such school is in session, for the purpose of instructing the pupils thereof as to ways and means of preventing accidents.

Which is supplemented by Section 7724-2, General Code (*Ohio School Laws,* 1922, p. 376):

> The superintendent of public instruction shall prepare, publish, and distribute, at the expense of the state, a manual conveniently arranged in chapters or lessons for the guidance of teachers in carrying out the provisions of this act (G. C. ff 7724-1 to 7724-2).

This requirement undoubtedly increases the need of a supervisory force, and does not specifically encourage economy by reduction or elimination in the supervisory and administrative organization.

The last group of requirements for elementary schools is contained in the following sections:

Section 12900, General Code (*Ohio School Laws,* 1922, p. 584) reads:

> Whoever, being a principal or person in charge of a public or private school or educational institution having an average daily attendance of fifty or more pupils, or the person in charge of any children's home or orphanage housing twenty or more minor persons, wilfully neglects to instruct and train such children by means of drills or rapid dismissals at least once a month while such school, institution or children's home is in operation so that children in a sudden emergency may leave the building in the shortest possible time without confusion, or, in the case of schools, wilfully neglects to keep the doors and exits of such building unlocked during school hours, shall be fined not less than five dollars, nor more than twenty dollars for each offense. The state fire marshal shall have authority to order the immediate installation of necessary fire gongs or signals in such schools, institutions, or children's homes and enforce the further provisions of this section.

This is followed by Section 12901, General Code (*Ohio School Laws,* 1922, p. 584):

> The state fire marshal and the superintendent of public instruction are hereby empowered and directed jointly to pro-

vide a course of study in fire prevention for use in the public, private, or parochial schools of the state, dealing with the protection of lives and property against loss or damage as a result of preventable fire. It shall be the duty of each board of education or the board or persons in control of such schools to compel the use of such course of study in each school under their control. Whoever, being a teacher or instructor in a public, private, or parochial school, wilfully neglects to devote at least fifteen minutes in each week during which such school is in session to instructing the pupils thereof as to the dangers of fire, shall be guilty of a misdemeanor and fined not less than five dollars nor more than twenty dollars.

Section 12902, General Code (*Ohio School Laws,* 1922, p. 585):

On and after September 1, 1921, it shall be the duty of each teacher in the public, private, or parochial schools in the state to use such course of study in fire prevention in the classes under his control. There shall be placed in the hands of each teacher above mentioned, prior to September 1, 1921, by the superintendent of public instruction, through the county superintendent of schools, a book for the purpose of the instruction of pupils provided in the next two preceding sections. Such book shall be conveniently arranged in a sufficient number of chapters or lessons to provide a different one thereof for each week of the maximum school year.

Section 12905, General Code (*Ohio School Laws,* 1922, p. 586):

Boards of education having control of the schools of a rural, village, or city school district shall cause a copy of sections 12900 and 12901, General Code, to be printed in the manual or handbook prepared for the guidance of teachers, where such manual is in use.

These statutes make mandatory a definite and additional piece of teaching, involving a further extension of supervisory and administrative organization.

The laws define a high school in Section 7649, General Code (*Ohio School Laws,* 1922, p. 332), as follows:

A high school is one of higher grade than an elementary school, in which instruction and training are given in approved courses in the history of the United States and other countries; composition, rhetoric, English and American literature; algebra and geometry; natural science, political or mental science; ancient or modern foreign languages, or both; commercial and industrial branches; or such of the branches named as the length of its curriculum makes possible. Also such other branches of

> higher grade than those to be taught in the elementary schools, with such advanced studies and advanced reviews of the common branches as the board of education directs.

In addition to this section, there is definite reference to high schools in the specific and mandatory requirements of the sections quoted above, relating to (1) thrift, thirty minutes a week (Section 7645); (2) Arbor Day, two hours each year (Section 7688); (3) temperance day, two hours each year (Sec. 7688-1); (4) physical education, one hundred minutes a week (Sec. 7721); (5) instruction in preventing accidents, thirty minutes each month (Sec. 7724-1); (6) fire prevention, fifteen minutes each week (Sec. 12901).

It would seem evident from this statement that the mandatory provisions of the statutes are not encouraging reduction in the supervisory and administrative organization of the high schools.

This review of the statutory requirements, making mandatory or permissive the teaching of specified subjects, in some instances for a specified amount of time, serves to indicate that the course of legislation is not tending toward economy by means of a reduction of the supervisory and administrative organization of our schools. It may be assumed, too, that future sessions of the legislature will add other requirements, and so confirm us in our belief that economy here is not to come through law.

Only as school administrators come to determine what effective supervision is, what qualifications competent supervisors should possess, what limitations time and space put upon the service of such supervisors, and what are the minimum essentials in the field of supervision below which a present-day school system cannot go, shall we be able to delimit costs in the fundamental field of school organization, and plan real economies. It may be expected that students of school administration will give their attention to this field, in a critical, constructive survey, and then recommend modification of our present organization, to effect economy.

ECONOMIES TO BE EFFECTED IN THE SUPERVISORY AND ADMINISTRATIVE ORGANIZATION

C. R. Reed
Superintendent of Schools, Akron

It is a well-known fact that the expenses for administration and supervision constitute a very small percentage of the current school costs for any given period. On account of the different methods of school accounting which are in vogue in various cities, it is extremely difficult to get comparative figures upon this item which are of any value. The general items of expense which are included in General Control are the salary of the superintendent of schools and the expenses of his office, salary and expenses of assistant superintendents of schools, the attendance department, the research department, the board of education offices, including the director of schools or business manager, or according to the Akron organization, the assistant superintendent in charge of business affairs, clerk-treasurer of the board, and other clerical service. This expense is fairly definite and is easy to get.

Difficulties begin to develop, however, when the matter of supervision is under consideration. There are two kinds of supervision in the larger cities: (1) general supervision, which comes from the central office and covers the whole city, a geographical portion of the city, or a particular subject in the curriculum; and (2) field supervision, supervision by the principal of the school.

In the first case, there is a difficulty in differentiating between supervisors and teachers, especially in the special subjects like music, art, and physical training. In some of the smaller school systems, teachers of these subjects are called supervisors and receive a higher salary than regular grade teachers. In cities where the platoon form of school organization is in use or a departmentalized school has been established, the teachers of special subjects become regular classroom teachers and do not constitute an extra expense. Well-trained teachers in the special subjects make possible a reduction in the amount of supervision. In some

school systems elementary-school principals are part-time supervisors and in some systems they give all their time to supervision and administration. In school accounting, principals are usually counted as instruction and placed on the teachers' pay-roll, in which case it is extremely difficult to get a proper financial statement concerning the expense for supervision.

The item of General Control is definite and fairly well defined so it is possible to give figures concerning the expense of this item. The following figures are from the *Annual Report of the Akron Schools* for the year 1923. The basis for this study was a body of statistics on cities furnished by the Bureau of Education at Washington. The figures are for the year 1922. The following cities are considered because they are somewhat comparable on account of population and educational needs: Akron; Columbus; Dayton; Denver, Colo.; Grand Rapids, Mich.; New Haven, Conn.; Oakland, Calif.; Portland, Ore.; Providence, R. I.; Scranton, Pa.; Springfield, Mass.; Toledo; and Worcester, Mass.

In the list of cities considered, the expense for General Control varied from $1.48 per pupil to $3.92 per pupil in average daily attendance. According to Table 21 on city school expenditures and costs[1] issued by the National Education Association for the fiscal year ending 1923, containing forty-three cities, the median cost for General Control was $2.35 per pupil divided as follows:

$ .97 per pupil for business administration
1.38 per pupil for educational administration

$2.35

It is difficult to set standards for this item of expense on account of the differing conditions in various cities. It would appear, however, from the actual facts for the year ending in 1923, that this expense ought not to run over $3.50 per pupil; the expense of the business department not over $1.50 per pupil. Where this item of expense is excessive, a careful study of salaries and office personnel may result in substantial savings.

[1]National Education Association. *Current Facts on City School Costs*, Washington, D. C. National Education Association, 1924. p. 37. (Research Bulletin, National Education Association.)

Supervision

Table 21 which has been mentioned before gives the figures on the cost of supervision in the same forty-three cities, including the expense for elementary-school principals. The median cost for this item was $6.10 per pupil in average daily attendance. Supervision cost which runs over $7.50 per pupil is excessive.

For purpose of comparison, let us consider the foregoing costs as percentages. Referring to the same table, the median per pupil cost for current expense based on average daily attendance was $90.59. The expense of General Control was 2.5 percent of the total and the expense for supervision, 6.7 percent. The total expense of these items is 9.2 percent of the total cost per pupil. This financial data makes it evident that any savings which can be made in the administration and supervision of schools must necessarily be small.

Your committee is of the opinion that the elimination of supervision would not constitute a saving. The way to effect economy in supervision is by so improving its quality that it becomes an acknowledged agency for economies throughout the school system. Those who are responsible for the administration and supervision of schools throughout the state must see to it that such supervision is improving the quality of instruction, thereby reducing the amount of retardation and eliminating waste within the school system. The question does not concern so much the amount of money spent on supervision as the results of that supervision as it effects the boys and girls in school. Any saving in school expenses which reduces the quality of service rendered is not a real economy.

Your committee recommends that as a means of eliminating waste in the administration and supervision of the school system a definite outline be made giving in detail the duties of each person in this part of the school system. One source of waste in any organization is indefiniteness and purposeless effort. When each person has a clear statement of his duties, frequent checks should be made by the superintendent of schools to see that these duties

are being performed. Regular reports should be required of supervisors, assistant superintendents, and other administrative and supervisory officers so that each position may justify itself by the results attained in increased efficiency in the school system.

The fact that the expense of education consists for the most part of salaries paid to teachers is elemental. An examination of the budgets of towns, counties, or of cities, will show that from 70 percent to 85 percent of the total expense of carrying on schools is paid directly to teachers for their services. This is so widely known that any attempt to prove it is unnecessary. Because such a large proportion of school funds is being spent for salaries, it is evident that any economy in the conduct of school affairs which contemplates the reduction of budgets by any considerable amount must involve a reduction of the salaries of the teachers. This does not mean that economies of reorganization within the system cannot be effected. It is true, however, that the amount of money saved by such economies will be small when compared with the total amount expended for educational purposes. This situation must be faced squarely.

Your committee stands firmly against a reduction of teachers' salaries. It is convinced that a saving effected by such a method would not be true economy, for it would inevitably result in eventually offering a poorer quality of education to Ohio's children. The day has passed when the name economy can be given such a plan. According to the *Cincinnati Building Witness,* bricklayers are getting between $11.00 and $13.50 a day. Allowing for a lay-off of twelve weeks because of inclement weather, they earn $2,800 annually at the present scale of wages. There are very few teachers, even those with graduate degrees, who are receiving a salary equal to this in the public schools of Ohio. Other building trades are receiving proportionately high wages, and there has been very little reduction in the cost of living from the peak period which was reached in 1920.

What are some of the ways in which economies might be made within a school system?

There is little objective evidence which shows the influence of the size of a class upon the effectiveness of teaching. Opinion

has varied as to just how large classes should be. Your committee has been unable to obtain convincing evidence that the improvement in the results of classroom instruction, obtained by reducing the average number of pupils per teacher in the elementary school below forty and in the high school below thirty, justifies the increased expense when funds are low. It suggests that here is one place where some systems might save. The semi-annual promotion is an obstacle to this means of economizing. In a small elementary school the January class is very often less than forty and may be of such size as to make it very difficult to build an efficient organization with enough pupils without having too many grades in a room. The necessity of reorganizing twice during the school year is not conducive to economy.

One of the chief arguments for semi-annual promotions has been that such a plan eliminates much of the loss of time caused by retardations, and that by this elimination expense is reduced. Your committee suggests that expense might be further reduced by returning to the plan of annual promotions so administered that approximately a 100 percent movement through the twelve grades would take place. This would imply a most careful organization of classes upon the basis of intelligence, and the adaptation of subject matter and methods of instruction to meet the needs of the different classes. It is well understood that such a reorganization would require careful study before it is attempted. Your committee believes that such study should be undertaken and assiduously pursued by those genuinely interested in the financial and educational aspects of school work.

The platoon system as it is being used in Akron, Detroit, and other cities saves from 30 percent to 40 percent on building costs by increasing the capacity of the building and reduces the cost of operation by savings upon textbooks and supplies.

An extension of the continuation school or part-time instruction idea to relieve the high-school burdens is a possible economy which should be studied carefully by those in charge of school systems. There are many boys who are much better served educationally and socially by part-time school rather than full-time high school. The opportunity of earning money and learning at

the same time is in some cases a financial necessity for boys between sixteen and eighteen and in other cases is the best thing for the boy regardless of the financial status of the family.

The large cuts which are sometimes necessary in school expenses should be made by reducing the quantity of service rendered by the school system rather than the quality. There has been a tendency for the last ten or twenty years for the school system to gradually attempt to correct the mistakes of the municipality and to assume more and more the duties of the home. We may have arrived at the time in educational history when the tax situation demands that the trend in this direction be stopped and that eliminations be made in the services rendered in so far as those services are not concerned primarily with the instruction of girls and boys in school. All of these services have been introduced into the school system as a result of the growing demand of the public that the schools assume a larger responsibility for the welfare of citizens. Many of these features are exceedingly popular and desirable if we have the money to pay for them. Possibly one of the ways to find out just how much they are desired would be to eliminate them from the school system and put the issue up to the citizens. Among these items are health supervision, adequate playgrounds for all the schools, free use of school buildings outside of school hours, citizenship training for foreigners, extension work at night for adults, open-window rooms, instrumental music, dental clinic, and other activities of like nature.

ECONOMIES TO BE EFFECTED BY THE REORGANIZATION OF THE TEACHING LOAD IN THE HIGH SCHOOL

F. J. Prout
Superintendent of Schools, Sandusky

The cost of high-school teachers in Ohio, according to the 1922 Ohio school report, was $10,103,475. This cost is so large

as that it immediately suggests a fertile field in which to effect economies by increasing the teacher load.

It is apparent to anyone that there are two possibilities of increasing the teacher load—increase the number of class periods or increase the size of the classes.

When we consider the first of these possibilities we promptly face the fact that more hours will make for mental and physical fatigue of teacher and pupil. One member of this committee (Mr. Elliott of Mt. Vernon) has conducted a study to determine just how many class periods a teacher may be able to work without reaching the point of mental or physical fag. While this study does not include enough cases to determine exactly the fag point, it does include enough cases to determine the trend. Deductions from this study indicate that both high-school and elementary-school practice has reached the point where it is uneconomical to extend the number of teaching periods. This is also the conclusion of Supt. Corson, Newark, N. J., after an exhaustive study. I dare say that the school men here assembled, would unanimously agree that our experience would warrant the same conclusion. Thus we must dismiss from consideration the possibility of making economies by increasing the number of teaching periods.

When we investigate the second possibility—that of increasing the number of pupils at each class period, the situation is very different. There has been for years in the minds of all of us, a firm conviction that the limitation of the size of classes, as imposed by the North Central Association of Colleges, has been unreasonable and unjustifiable. We have instinctively, as well as from experience, known that skilled teachers can teach successfully classes of forty or more in history, civics, sociology and the like, yet the North Central Association has prohibited classes above thirty, imposed a pupil ratio of twenty-five, and has dealt harshly with schools that have, probably of necessity, exceeded these requirements.

Very fortunately in discussing this subject this morning it is not necessary to theorize as to whether or not classes may be enlarged with safety. Studies and experiments with larger

classes have been carefully and scientifically made in recent months. It is too soon to draw positive conclusions from these limited investigations but the results seem to justify the contention that classes may be considerably increased in size without appreciable loss in teaching results. We wish to present brief summaries of two pertinent experiments.

1. Mr. E. L. Miller, supervising principal of Detroit high schools says:

> In 1920 the per capita annual cost of the Detroit high schools had risen to approximately $180.00. In order to economize we proceeded to lay down the rule that each teacher must have five classes of thirty pupils each, or six classes of twenty-five pupils each, except in the Department of Health Education, in which we doubled the number of pupils to be instructed by each teacher. Our teacher load at that time was approximately twenty-one pupils to each teacher. On February 28, 1924, we had in our eight academic high schools, 17,331 pupils and 566 teachers, or almost exactly thirty pupils to a teacher. We also eliminated some non-essential classes. These arrangements have enabled us to cut the annual per capita cost to about $109.00, a grand total saving of $1,230,500. As far as I can ascertain, there has been no serious injury to our scholarship. In the Northern and Southeastern high schools I have positive evidence, based on careful studies, that the scholarship has improved about one percent. The graduates of the Northern High School in colleges in 1920 passed in seventy-six percent of their college subjects; in 1923 they passed in ninety-seven percent.

This would indicate that Detroit has saved a million and a quarter dollars and lost nothing in the saving.

2. In the second place we have the results of the study of class-size by P. R. Stevenson in the Chicago schools in 1920.[2] These results warrant the thoughtful study of every school superintendent in this state. Carefully and scientifically Mr. Stevenson studies the problem of class-size from every viewpoint. It will be impossible to go into detail of this study. The best we can hope to do this morning, is to present to you just two summaries, Table I, one a comparison of classes *nearly* twice as large as the same number of small classes, and Table II, in which the large classes are at least *twice* as large as the same number of

[2] *Smaller Classess or Larger.* Bloomington, Illinois, Public School Publishing Company, 1923. 127 pp. (Journal of Educational Research, Monographs, No. 4.)

small classes. This study is summarized in these words: "From data thus far presented we may conclude that on the whole the small classes did slightly, very slightly—better on the term of work and examination than the larger classes with which they were paired." Seven other studies, from 1909 to the present time tend to support the conclusion that large classes are about as

TABLE I. COMPARISON OF AVERAGE INTELLIGENT SCORES, AVERAGE TERM GRADES, AND AVERAGE EXAMINATION GRADES OF THE DIFFERENT SUBJECTS FOR 67 LARGE AND 67 SMALL CLASSES

SUBJECTS	NUMBER OF PAIRS OF CLASSES	AVERAGE SIZE		AVERAGE INTELLIGENCE SCORE		AVERAGE TERM GRADE		AVERAGE EXAMINATION GRADE	
		Large	Small	Large	Small	Large	Small	Large	Small
English	22	38	20	103	102	77	78	77	79
Algebra	18	36	20	100	103	74	77	76	77
History	2	34	21	139	137	76	75	75	74
Geometry	3	41	23	128	121	76	77	63	68
Stenography	3	37	22	84	86	78	78	78	80
Latin	1	39	25	104	93	77	74	75	71
French	2	35	19	110	113	74	71	71	71
Typewriting	3	39	25	83	88	73	77	80	83
Botany	4	28	18	126	122	74	74	72	73
Arithmetic	3	39	23	90	90	75	75	63	64
General Science	6	36	22	110	110	75	77	75	76
Total	67	2457	1388	6987	6994	5055	5147	5019	5118
Average	....	37	21	104	104	76	77	75	76

efficient as small classes. It is the judgment of this committee that the teacher load may be increased by giving the teacher more pupils per class.

How much money will the increase of the class maximum and pupil ratio save? We have already had the answer of the Detroit system where the class average was increased from twenty-three to thirty with a saving of $1,230,500. No one of us will dispute that if we adopted the conservative increase of pupil ratio from the present twenty-five imposed by the North Central to thirty, the Detroit ratio, the saving would be appre-

ciable and worth while for every one of our communities, and decidedly so for cities where the enrollment is sufficiently large as to eliminate the problem of very small classes. I can speak with authority for the Sandusky high school. It has been determined that leaving the present size of the domestic science, physics, and chemistry classes just as they now are, but increas-

TABLE II. INTELLIGENCE AND RATINGS OF LARGE AND SMALL CLASSES WHERE THE LARGE CLASSES WERE AT LEAST TWICE THE SIZE OF THE SMALL CLASSES

SUBJECTS	NUMBER OF PAIRS OF CLASSES	AVERAGE SIZE		AVERAGE INTELLIGENCE SCORE		AVERAGE TERM GRADE		AVERAGE EXAMINATION GRADE	
		Large	Small	Large	Small	Large	Small	Large	Small
English	8	39	16	90	91	77	78	77	79
Algebra	5	40	18	90	100	75	79	86	86
General Science	1	42	17	73	79	70	70	70	70
Botany	1	33	15	129	118	7	72	78	76
Stenography	1	36	18	52	56	73	73	71	77
Total	16	623	284	1454	1481	1212	1234	1265	1285
Average	....	39	18	91	93	76	77	79	80

ing all others so that no class shall exceed thirty-five, and there shall be a pupil ratio of thirty per class, there would be a saving of seven teachers—a saving of instruction cost of $12,600 to the city of Sandusky. On the same basis of five pupil increase, using the figures of the 1922 *Ohio School Report,* the yearly saving in all cities of the state would total $1,075,334.

If exempted villages and rural high schools would solve the ever present problem of very small classes—which they are now doing more and more frequently in the offering of courses in alternate years—then much the same ratio of saving might maintain for these divisions as holds for the cities. If so, the saving in the village and rural districts would total $712,000. The grand total for the state might equal the sum of $1,787,334.

Notice in this estimate of savings we have adopted the conservative basis of increasing our maximum and average only five per class and have not included certain laboratory classes. Mr. Stevenson's Chicago study would indicate that a maximum of forty and an average of thirty-five would be safe. Such an increase of class load would save probably two and one-half millions each year. This committee, however, believes it is more practicable and wiser at this time to suggest the more conservative basis of thirty-five pupils for a maximum and thirty for a pupil ratio. The teaching load to be six periods of forty-five minutes each, with twenty-five for a maximum of laboratory classes. We repeat to you that this would probably mean a saving of nearly $1,800,000, and we believe the experience of Ohio schools, would be that of the Detroit—we would save about two million dollars but would not lose our efficiency.

THE OUTLINING OF SOME PLAN WHEREBY ADEQUATE FINANCIAL SUPPORT THROUGH TAXATION MAY BE ASSURED TO THE PUBLIC SCHOOLS

G. C. Dietrich
Superintendent of Schools, Piqua

For many years the public schools in most sections of Ohio have not been given adequate financial support. Expenditures have exceeded receipts and the schools have been maintained on borrowed money. These borrowed funds were allowed to accumulate as a floating debt for several years, then special legislation would permit the issuance of bonds to refund the floating debt. This policy has been in force for many years in some communities, and as a consequence bonded debts out of all proportion to the valuation of property in these districts, have been the outcome. The burden of these along with other bonded debts for building purposes brought about a condition which the last legislature attempted to correct. In House Bill No. 599 it author-

ized that all floating debts should be refunded by the issuance of bonds of eight-years maturity, and also provided that after January 1, 1924, no board of education could borrow money for the maintenance of schools.

The enactment of such a law was altogether timely and wise, but the consequences have been serious to those communities which have been depending upon loans and emergency legislation. The need of more adequate support for our schools is now so acute that something must be done or the children in many sections will be deprived of their schooling, and even in some of our richer cities and counties the length of the school term must be shortened to five or six months. As Ohio Statutes provide for at least eight months schooling there is presented a legal knot almost too difficult for our State Department to disentangle.

At practically every conference or convention of school superintendents for many years there has been on the program a discussion of methods to procure additional revenues for our schools. In recent times little or no improvement has been the outcome of these discussions. Unfortunately all the people have not been as cognizant of our educational need for more financial support as have bodies of school men. But the exigency of the present moment may awaken the people to the need of more financial support for their public schools. A realization of this condition emboldens this committee to offer a report at this time.

It would not be a difficult matter to outline a number of plans for taxation that would assure adequate financial support to the public schools. The real difficulty would come in an effort to prevail upon the legislature or the people to accept the same. The practical phase of any suggestions for tax reform is more important than the theoretical phase. This committee firmly believes that the first question which ought to be answered is, Can these plans be carried out? While the likelihood of its acceptance or adoption with the present attitude of the people on taxation is a question that arises in the consideration of every plan. Just now there is great uneasiness and distrust among a large class of taxpayers which makes itself manifest in strong opposition to every change. This antagonism is not always based on rational

grounds and the flame of opposition is more highly kindled by propaganda, which is supported by organizations with very selfish aims back of their activities.

The Taft measure of last year was not a panacea for all the financial ills of municipalities and school districts, but it was a step in the right direction and contained many splendid features. We know its fate, and we also know that its defeat in the referendum will make the task of making a law out of any other corrective revenue measure all the more difficult. For the immediate relief of the schools and cities the committee believes that the Taft bill was a worthy plan.

There are some who would advocate classification of property for taxation as a solution for our problem, but he is a bold and audacious prophet indeed who would dare to forecast the adoption of classification in Ohio after the body blows it has been dealt in the recent elections. Your committee will not recommend classification as a plan for obtaining adequate financial support for the schools.

The limitations of the Smith One Percent Law, which already have been hacked here and there so many times that they are hardly in force today, ought to be wholly stricken from the statutes. Legislative leaders have been afraid to deliver the fatal blow; they seem to prefer to attack it by stiletto blows in the back, but they have left so many scars even on the face of the law that it would not be recognized by its own parents or god-parents. Your committee would recommend that the ten-mill limitation of the law for current expenses be stricken from the statutes, if it thought that such a thing could be done. The ten-mill rate to meet the combined current expenses of schools, cities, townships, and counties will never be sufficient as long as tax duplicates fail to show any appreciable advance over what they were before all living and maintenance costs doubled.

As a committee we do have a few plans which we will offer at this time. These do not represent any original ideas, but do seem to them to be feasible if all parties interested in more revenues will rally to their support. As municipalities are in the same financial difficulties as school districts any plans outlined for the

benefit of Boards of Education must include city administrations in their scope, if success is to follow their trial. We would recommend:

First, That an effort be made at the very next session of the legislature to bring out the hidden wealth of the state so that tax duplicates will more nearly conform to the real wealth of communities. This can be done in three ways:

1. By a reappraisal of property which should be state-wide in its scope.
2. By a legal prohibition on the issuance of tax-exempt bonds in the future. This will involve national as well as state ramifications in the final outcome.
3. By a repeal of the statutes which prevent our county auditors from thorough investigations of the personal property concealed by certain "tax-dodgers." Not until the county auditor has the authority to inspect the books of banks and loan associations will the tax duplicates of communities bear any close resemblance to the wealth of communities.[3]

Second, That every community be granted local option in determining what its tax rate shall be for the development and maintenance of its schools and its local government, after State-wide limitations are found to be inadequate for meeting the needs of the communities. This feature was incorporated in the Taft measure, and in the light of what has happened recently, was not understood by thousands of voters in the State. It was provided in the Taft measure, and it is our recommendation that any increase over the State limitation shall be made by the vote of the electors of the taxing district. At present it is possible to vote an increase up to three mills but the amount of the increase is not adequate in every case, and will not be in the future, if boards of education are to be deprived the privilege of borrowing money and depending upon emergency bond issues.

Third, That the law be changed which determines the membership of the County Budget Commission so that the schools will have a representative on the Commission. At present the tax rate for county needs is positively determined before the budgets of cities or school districts are given any consideration by the

[3]One of the members of the committee will report on the results of an investigation he has recently made of the amounts on deposit in some of our banking institutions.

Commission. Those dependent upon larger items of the budget should be given an equal hearing with those less interested. It seems hardly fair that the cities and the schools should be compelled to take what is left when they are nearer to the people than other branches of our government.

Fourth, That the State Department of Education be given all authority needed to provide at least eight months schooling for every child of school age in Ohio. That when communities fail to vote the additional levies necessary for school terms of this length that the Director of Education may arbitrarily place the levy upon the taxable property of the district at the same time that he awards State funds for the maintenance of the schools. It is a sad reflection upon the enlightened citizenship of Ohio that with all her resources of wealth there are upon her Statutes legal restrictions which close the doors of schoolhouses to her boys and girls in those months of the year when only idleness can occupy their time.

Finally, That school superintendents interest themselves more in the making of their school budgets, that they keep themselves thoroughly informed as to the financial status of their school districts, that they try to anticipate financial difficulties, and through a campaign of publicity prepare their patrons for the crisis that may be approaching the financial welfare of their schools. The day is past when the school superintendent of the smaller city or county district is able to restrict his efforts to the scholastic phases of work alone. Without adequate financial support our schools will need much less supervision.

THE OUTLINING OF SOME PLAN WHEREBY ADEQUATE SUPPORT THROUGH TAXATION MAY BE ASSURED TO THE PUBLIC SCHOOLS

E. V. Bowers
Superintendent of Schools, Galion

My part of this report deals almost exclusively with the comparative amount of personal property returned for taxation and the true value of all personal property.

The assessed value of all personal property for the entire state is $4,100,000,000. The amount of deposits in all banks, state, national and private, and building and loans is $2,462,000,000. The value of all moneys on deposit or subject to draft as returned for taxation amounts to only $275,000,000. The difference between the total deposits and the moneys returned for taxation would produce $45,800,000 or 20 percent of the present taxes. In many districts the total deposits in banks or building and loans exceeds the assessed value of all personal property.

The amount of money on the tax duplicate is only 12 percent of the amount of money deposited in all banks. This shows that only about one dollar in every eight is returned for taxation. Under the present Ohio Constitution and conditions in general it is rather dangerous to offer any suggestions for bringing out this money for taxation. On the one hand some claim that the county auditor should be given authority to go into the banks and secure the actual deposits. Others advocate that the banks should be taxed on this money and they in turn collect it from the depositors. On the other hand the banks claim that either of these methods would almost ruin the banking business and that the money would be withdrawn from circulation to such an extent as to practically ruin business in general. Banks are advocating strongly for classification of property. If the amount of money now hidden could be taxed only a few mills it would produce a large amount of money and in itself would greatly relieve the present situation relative to high taxes.

I sent out a questionnaire and received in return approximately fifty answers. In this questionnaire I asked what percent the assessed value of real estate is of the true value. Of the fifty answers received the average was 66 percent of the true value—the median 60 percent. According to report it seems that the banks are also not reporting their full value for taxation. Banks are supposed to return their capital stock, surplus, and undivided dividends for taxation. According to the latest report from the state department of banks and building and loans the capital stock, surplus and undivided dividends amount to approximately $452,000,000. The total value returned for taxation is only

approximately half this amount or $235,549,000. A difference of $116,000,000.

It may be interesting also to know that of the total amount of tax raised in Ohio in the past year, schools received 45 percent, which is an increase of 17 percent within the past five years. This increase is about the average for cities, counties, and townships. The average rate of taxation in the state is 21.32 mills—the highest, 36.4 mills and the lowest, 6.8 mills both for rural districts. In many districts the amount of deposits exceeds the total assessed valuation of personal property. This shows a great need for some systematic method of obtaining taxes on all property. I believe that there should be a demand for a state-wide reappraisement of all real estate. Also in order to solve the tax problem in Ohio it will be necessary that an expert commission be employed to study the situation and make a report and then that all politics and other personal interests be dropped long enough to adopt and put in operation this commission.

THE OUTLINING OF SOME PLAN WHEREBY ADEQUATE SUPPORT THROUGH TAXATION MAY BE ASSURED TO THE PUBLIC SCHOOLS

W. A. Walls
Superintendent of Schools, Kent

During recent weeks we have been listening to a good deal of inaccurate data. The report on the Alliance schools is a case in question. It is stated that $30,000 could be saved by cutting the teachers' salaries for the tenth month when there is no school. New teachers' salaries are based on yearly amounts and as a matter of convenience in bookkeeping it is a good deal easier to pay them in ten installments than in nine. Alliance at the present time has one of the lowest paid teaching corps in the state for a city of its size.

It is also recommended that all high-school classes enroll twenty-five pupils. Such a ruling applied to the Kent High School would eliminate the following subjects: Geometry (one class),

American literature, French III, Latin III and IV, solid geometry, gymnasium (two classes), all vocational work conducted under Federal aid, typewriting, shorthand III and IV, general science (one class), commercial law, mechanical drawing, domestic art, domestic science, and home furnishing.

The classes listed above are those that have an enrollment of less than twenty based on the reports for March. I believe that the people of the smaller cities are entitled to have their children study these subjects if they are willing to bear the expense.

Mention is also made of the hiring of a clerk at the rate of fifty dollars per month. Clerks are not hired for that salary in Kent at the present time.

In regard to suggestions for remedying conditions in the State of Ohio, the following might be mentioned: (1) a full return of personal property; (2) a 100 percent valuation of real estate, and (3) a special effort for the collection of back taxes.

If the real estate of Kent were on a 100 percent valuation instead of the present 80 percent or 70 percent, our valuation would be increased from $12,000,000 to $15,000,000. If this was done and the higher budget asked for by the schools was granted, the tax rate could be lowered from 10.61 mills to 9.02 mills or a decrease of 1.59 mills.

One of the things that school systems need today is an adequate publicity program to keep the people informed as to how their money is spent and what returns they are receiving for the expenditures.

There may be some extravagance in our schools and there are many places where costs can be cut but I do not believe that as a general proposition the cost for education can be materially decreased during the ensuing years if the public continues to demand the program they are demanding at the present time from the public schools.

CLINICAL PSYCHOLOGY

H. H. GODDARD, Ohio State University, Presiding

CLASSIFICATION OF MENTALLY DEFICIENT AND RETARDED CHILDREN FOR INSTRUCTION

J. E. W. WALLIN

Bureau of Special Education and Psycho-Educational Clinic, Miami University

The plea of this address, as well as its excuse, is that there must be a sharper differentiation between grades of deficient or subaverage pupils than has generally hitherto obtained; that there must be a sharper differentiation of types of special classes to meet the needs of various grades of such pupils; and that the prime consideration in the organization of such classes and in the differential assignment of the pupils must be purely educational.

In harmony with these principles, the specific suggestion which I have to offer is that there must be organized at the minimum two distinct orders or kinds of classes for mentally inefficient and retarded pupils in the grades. One of these types of classes should be reserved for children of very limited mental power or educational potentialities and the other for children of higher mental and educational ability. I shall in this address refer to the classes for the lower grades as special classes or special schools, and to the classes for the higher grades as ungraded classes. Doubtless there will be differences of opinion as to where to draw the upper and lower boundary lines for each type of class.

What, then, are the standards which have governed the differential assignment of pupils to these two systems of classes? Stated briefly in terms of the most important criteria, mental and educational capacities, the assignments to the special classes or schools, the classes for the most deficient children, have been limited to pupils whose intelligence quotients as determined by the Stanford-Binet have varied from 30 to 65 or 70; whose intelligence age has varied from three years to nine years; and

whose educational status has varied from sub-kindergarten capacity to a possible maximum attainment of beginning third-grade work, although chronological age at the time of withdrawal was fourteen years. In other words, the brightest pupils in this group will not do satisfactory all-round school work at the age of fourteen beyond the beginning of the third grade, although many may function beyond this level in certain branches in which they possess greater talent. The pupils assigned to the ungraded classes, the classes for the least deficient, on the other hand, will vary from an I. Q. of about 65 to an I. Q. of 85 or 90, and from a potential or eventual educational attainment level of from the third grade to the sixth grade, or even higher. The intelligence-age level will vary greatly according to the age of the child at the time of transfer.

The considerations of prime importance for the classification and segregation of mentally subnormal children in the schools are the child's present educational status and educational potentialities, which of course, are vitally affected by his mental capacity, expressed in his "intelligence age-level," and "intelligence quotient," and by his mental peculiarities.

Children who differ very greatly in amount of handicap or deficiency should not be assigned to the same kind of class. The successful operation of a special or ungraded class demands a certain degree of homogeneity in the pupil material.

Accordingly it will be necessary to draw a line of demarkation somewhere. The point at which such a line is drawn will, admittedly, be more or less arbitrary. We have suggested above that there must be at least two orders, levels, or kinds of special classes for mentally and educationally retarded children, and have indicated where the line can be successfully drawn between special and ungraded classes. The suggestions made are not based on speculative armchair theories of special-class organization, but they represent the culmination of many years of actual experience in the organization of different kinds of special classes in public-school systems.

Children transferred to the special classes should not be assigned for the reason that they are feeble-minded, socially and

industrially considered, nor should it be assumed that they are feeble-minded, although most of them or all of them may prove to be so. They should be assigned solely because their mental and educational potentials are so limited that they cannot do satisfactory work in all of the regular branches of the curriculum beyond the primary grades or the beginning of the third grade. Certainly it will be a decided advantage to relieve the educator of the necessity of attempting to determine what children are or are not going to prove to be feeble-minded, or of attempting to solve the apparently insoluble question of where to draw the boundary line between mentally defective or non-mentally defective subnormals. We probably cannot avoid the necessity of applying some term to the children assigned to the special classes for the lower grades. It is very difficult to propose a term that is free from objections. The designations *mentally deficient children* or *mental deficients* will serve if not used as synonyms for feeble-minded or mentally defective children.

I submit these recommendations for your serious considerations.

THE APPLICATION OF SCIENTIFIC METHODS IN WELFARE WORK

Burdette G. Lewis
New Jersey State Commissioner of Institutions and Agencies

This is the day of the application of science and of inventive genius to every department of life. It is, therefore, impossible that health and welfare work should continue as they did in the Victorian Age. They must be carried on with a new purpose and with renewed hope. Our age calls for new ideas and renewed efforts in the health and welfare fields, just as it does in the field of commerce and finance. A survey of the situation confirms this belief.

An expert at Rutgers College, with the hope of developing some compensation for nervous disorders and distempers, is studying the nervous system of a tiny insect which can feign death

at will. Dr. Raymond Pearl of Johns Hopkins University is trying to prolong the life of the banana fly, which now lives only seventy days, with the hope that he may stop the onrush of old age. Dr. Alexis Carrel has been able to keep living tissues alive apart from the body for three years and still he keeps on with his work. Deadly diabetes is yielding to insulin and other treatments; the scarlet fever germ has been isolated and now the quest is for a serum to destroy the germ. We seem to be upon the threshold of important developments with respect to the tubercular bacillus. The Shick test has laid the ghost of dread diphtheria. Mental telepathy has been proved almost to the satisfaction of the laity. In short, scientific inquiry and inventors have already made the world a new place to live in and every department of modern life must be governed accordingly.

Merely as a generalization, in the face of all of this how can we permit a mere insane asylum or an old-fashioned state prison to exist? How can we justify a public general hospital without comprehensive out-patient work? How can a man who claims to be an expert remain upon the public payroll when he is chiefly ornamental?

The most striking thing about modern scientific discoveries is their diversity. A most important bearing upon public welfare work, especially in public institutions, is the chance that every institution may be made a demonstration center for one or two special features. That is where the right kind of a State Board of Control of all public institutions may function to the best advantage and it is right at that point that the wrong kind can do the most harm by laying a heavy hand of *uniformity* upon all, while it attempts to prevent overlapping of functions.

Dr. Max G. Schlapp has this to say in part, in an article in the *Journal of Heredity* for January, this year:

> "As a man thinketh in his heart, so is he," says the maxim. Since the Biblical proverb has already undergone considerable adaptation in achieving this wording and interpretation, it may not be unpardonable to revise it in conformity to recent science. Accordingly we may suggest, without disrespect, as a man functioneth in his neurons, so is he. . . . . Without pausing at this point to explain the inwardness of the matter, let me set down at once the fact that disorders of this functional activity

> of the cells in man are responsible for the existence of unnumbered individuals who are in greater or lesser degrees deranged from the normal, unable to adapt themselves to the environments in which they must live, misfits in this world of ours. . . . .
>
> The contention is that many of these unhappy individuals are, with such exceptions as noted in my preceding article, the result of chemical disbalance in the blood of the mother. If, as I contended in my previous writing, the formative activity of the cells in the child, may be disturbed by focal infections, the drain of infectious diseases, extrinsic poisons such as narcotics, alcohol, and others, and particularly by gland disorders in the mother, these statements are also to be accepted in the case of functional disturbances. That is to say, outer and inner poisons and endocrine maladjustment in the female parent may not only cause cells of the child to grow badly, but in addition often lay the foundation for future functional disorders. Hence mental defectives of either formative or functional types frequently are the offspring of women suffering from slight or grave diseases of these all-important secretory glands.
>
> For the physician and the parent, it is of the highest importance to note that such functional disturbances must be treated immediately upon their discovery, quite as in the case of formative troubles. Functional disorders of the ductless glands are progressive. Bad hormone balance irritates the nervous system, which in turn upsets the glands, with the result that they proceed to function still more abnormally with added injury to the neuron groups. This vicious circle of disease causes all types of functional disorder to progress eventually to a state of fixation, and at present the treatment of individuals in whom such ills have arrived at the chronic or established point does not always bring results. The fault in many cases is likely to be beyond rectification.

In New Jersey we have tried to avoid the evils of overlapping and of rigid uniformity. Trenton State Hospital under Dr. H. A. Cotton, has been developed as a center for physical treatment of insane patients and for extending its tested results to the other state institutions. Jamesburg State Home for Boys has been the center for demonstrating how mental measurements may vivify the Dalton Plan of Education, may make the project method vital in the new school of manual education and where boy scout methods work a revolution in institutional management. All told, this is a monument to the constructive ability of E. A. Doll and and Calvin Derrick. The Trenton Home for Girls and the Reformatory for Women have served to show how individual responsibility under a regime of student government builds up the character and the self-control of the inmates. Morris Plains State Hospital has shown how occupational therapy

and social service open new epochs in rehabilitating patients. Vineland Institution for Feeble-Minded and Rahway Reformatory have shown the significance of habit training in enlarging and stabilizing personality. Our Skillman Epileptic Village has shown how disturbed patients may be handled without restraint through the use of continuous baths and how sense training may be made a fundamental educational service. Our State Prison work has shown how the production of goods and the training of men may be going on at the same time in diversified industries.

All of this work is still in its infancy, but after six years we can say that present accomplishments are significant and are due to wonderful cooperation, to purposeful planning and to persistent coordinated effort. Let me read you what such a capable observer as Mr. H. A. Higgins, secretary of the Massachusetts Prison Association and former deputy commissioner of correction of Massachusetts, has to say about the New Jersey methods after a close study on the ground:

> What struck me most was the sweeping and comprehensive scheme of cooperation through which your diverse problems were brought to a focusing point under the study of expert group intelligence. I can think of no finer idea by which to approach so many related vital public interests with the combined economies of time, money, and trained intelligence. The integration of such a system of institutional administration and the realization of admirable detail in its operation has carried New Jersey forward to the point where she can justly lay claim to highly progressive leadership in this feature of her state administration. Expressed as a theoretical project on paper, it would seem an interesting adventure in vision, but in operation I found it to be a practical delight.
>
> I greatly admire the New Jersey idea of concentrating in the hands of a trained lay administrator all the institutional problems which are purely administrative in character. This relieves from administrative duties those experts of special training who in so many states, including Massachusetts, fritter away in such work their valuable expert time. It frees them to apply themselves solely to their medical and similar specialties. The idea works a twofold advantage by insuring the state that its expert skill and training both in administration and specialties are efficiently applied where they are productive of best results.
>
> The cooperation of the psychiatrical and psychological specialists with your institution heads in the examination of prisoners is excellent and deserves to be copied by any organization that aims to be efficient. Then the interest and assistance offered by educators and labor leaders or experts in training your pris-

> oners and fitting them for freedom is inspiring. The orderly and thorough way in which this is all worked out is illustrative of the sure and measured progress you have made over the purely experimental or hit or miss efforts. From each of the sources I have mentioned you seem to have developed a most admirable plan of practical and demonstrably productive specialization which is superior to anything in the correctional field anywhere.
>
> The plan of conducting our institutions in Massachusetts, although created only a few years ago, offers nothing approaching the New Jersey method as regards unified administration. We are sadly behind you in the economy of general management. We have a number of official bodies occupied with the departmental affairs which you have unified. Your plan makes for smoother administration, higher specialized efficiency, and greater economy. You have eliminated overlapping of functions and duplication of official duties.

In the *Prison World* of March 15, 1924, Mr. Higgins writes editorially as follows:

> There is no groping, no uncertainty, no catch-as-catch-can, to the New Jersey plan. Everything is measured, definite, and clear cut. From every important point of view the prisoner is studied and his adaptations, aptitudes, and correctional possibilities blue printed. Psychiatry plays its part in the scheme as it should. But unlike what is proposed in Massachusetts, New Jersey does not allow psychiatry to be the catch-all. On the contrary, the New Jersey prisoners are studied from the collective point of view by different experts all of whom bring their wisdom and intelligence to play in the problems involved. And it is noteworthy that the head of the institution presides over the group study of the prisoner.
>
> New Jersey has just reason to be proud of its admirable penal system, of which the classification process is but one of many examples of high efficiency. It is the natural result of New Jersey's policy of engaging men of the highest ability to conduct her institutions

Under this plan, Dr. Cotton has been supported in developing his specialties by the trained men within the Department and also by those in other State Departments. His work has been interpreted to the Legislature and to the people of the State and they have given unqualified support.

Dr. Cotton gave me an abstract of what he intended to say to you today. It is as follows:

> Fundamental principles discussed. Disease of brain and not of mind. A diseased brain causes mental diseases. No mental disease without lesions in the brain tissue.
>
> The role of heredity found to be of less importance than formerly believed; not the sole cause or only cause. Inherited

predisposition is lacking in a large proportion of mental cases, therefore, not a necessary factor. An heredity taint does not influence the prognosis of a given case.

Mental factors not the sole cause of mental disorders. They have an important role when found in a given case, but they are not essential in the causation of a mental disorder. Mental factors frequently act as precipitating factors in a given case.

The old formula of mental diseases, mental causes, therefore mental treatment, erroneous and misleading and has no place in modern practice.

Principal cause cerebral toxemia, the result of chronic sepsis in remote organs such as teeth, tonsils, stomach, intestinal tract and genito-urinary system. Frequently these foci of infection produce no local symptoms, therefore, the patient is ignorant of their existence.

A diagnostic survey of the psychotic individual is essential to determine existence of chronic sepsis, similar to methods used in general medicine. Thorough systematic and persistent efforts necessary to locate foci of chronic sepsis.

Treatment: Elimination of foci of infection wherever found, if possible by surgical means, extracting all infected teeth, enucleating infected tonsils, relieving gastro-intestinal infection and toxemia by means of surgery where possible, and by the use of vaccines and serums, excision of infected areas in genito-urinary system.

Results after five years' experience prove our contention that the principal cause of mental disorders of the so-called functional type is long standing toxemia resulting from chronic sepsis. The average spontaneous recovery rate for ten years prior to 1918 was 37 percent, since then this average recovery rate has been 87 percent. This increase of 50 percent is due to the methods of treatment. There has been a saving of over $690,000 to the State in the last five years as we now have 660 patients less than we would have had without treatement.

Treatment should be instituted as early as possible to be successful. It does not apply to cases of long duration because permanent changes in the brain tissue have occurred and restoration does not occur after infection is removed.

Hospitals for insane should be given every facility for such treatment: X-ray equipment, dental clinics, operating-room equipment, and laboratory facilities, and needless to add sufficient personnel to do the work.

Prevention: The big problem today is prevention of mental disorders. We have shown methods which produce successful results in treatment. If our work means anything, it means that many of these conditions could be prevented if the same methods were carried out long before the patient developed a psychosis. The school period is the time when such measures should be undertaken. Thorough examinations should be made similar to those outlined above and physical defects corrected. Statistics show that the rate of insane in Ohio is 212 per 100,000, and are in institutions for the insane. This being the case we would

urge periodic physical and mental examinations of school children between the ages of 12 and 15, or at the age they finish grammar school.

Ohio is to be congratulated upon the interest shown in these problems. A good start has been made at Dayton and other state hospitals.

Scientific methods have been applied not only in treatment, in training, and in industry of all institutions in New Jersey, but they also have been applied in every branch of farm work, in dairying, in animal husbandry, and in business administration. Every employee in every institution, in every agency, and in the central office has his job cut out for him. Nothing is left to chance. Modern business and modern accounting methods have been applied. We have demonstrated the economy of good salaries for good workers and the serious waste of poor salaries for hospital attendants.

In public building and public highway construction, we have shown how modern scientific methods may be employed. We have built good public buildings cheaper than private concerns have been able to build them. We have shown that good buildings can be built in the winter when labor is plentiful, as the buildings are planned so they can be. We have shown that architects can put a pleasing exterior upon a building built to do the work the doctors or the superintendents want to do, instead of sacrificing the use to exterior monumental treatment, which is the expensive luxury of certain types of architects.

Public institutions for misfits and for sick people are not as important as our public schools and health departments, but that is no reason why institutions should not be operated so that they will yield permanent results for the use of schools and health departments. We have contended that public institutions should be community centers and community enterprises, serving their own people incidentally, but ultimately the whole people. They can be made to function in that manner under the right kind of leadership.

Formerly at Trenton State Hospital, only a number of patients equal to 38 percent of the number received went home each year; now, a number equal to more than 80 percent of the new cases

coming in, excepting senile cases, go home and only 2 percent come back or go to other institutions. Many of these patients tell others, so that more cases get to their own physicians in time so that they need not come to the hospital. Moreover, more patients are treated in the same hospital and occupy the same number of beds during the year and get the attention of the same staff; that has saved the State of New Jersey at least one and one-half million dollars in the last five years.

These methods are just as applicable to the correctional field as they are to the hospital field. A skilled diagnostician examining the children in the public schools discovers cases that find their way eventually beyond the peradventure of a doubt into the State Hospital for the Insane or into the death house of our State Prison.

Louis Gilbert, a colored boy fourteen years of age, who came to Rahway, New Jersey, from Savannah, Georgia, six years ago, a boy in knee trousers, who now occupies a cell in the New Jersey State Prison as the result of conviction of murder in the second degree in the Supreme Court of New Jersey, is a striking example of this type of case. He typifies, in a way, society's responsibility for the rapid increase of juvenile delinquency in the United States. A boy with the low moral and emotional understanding of Louis Gilbert should have been discovered in early childhood and given treatment and proper training as a measure of protection to society. While society cannot be held primarily responsible for bringing a child such as Louis Gilbert into the world, it is responsible if it does not protect itself in time. His case has attracted nation-wide attention. It has shocked the people of this country almost beyond anything that has happened in many years, that New Jersey, noted for its justice, should permit such a little boy to be sentenced to the State Prison, and yet there was no other place for him at the time. He would be a misfit in law and in fact at our Jamesburg School for Boys and he is too young to be sent to Rahway Reformatory, as he is only fourteen.

We have another famous case of a man convicted of murder in the first degree by the testimony of his own father, who would

not lie in the witness stand to shield his son. This boy was examined when he was eight years of age and his future career as a murderer was then thought of. He was re-examined at ten, at twelve, at fourteen, at sixteen, at eighteen, and at twenty-two and the same prediction was made, but yet the State of New York had no proper institution for him and he was turned loose. He came to New Jersey and murdered a prominent real-estate operator in an attempt to rob him.

Ohio lacks a proper institution for these individuals just as does New York and New Jersey; Massachusetts is more fortunate, for it has Shirley Intermediate Reformatory. There, young chaps who are not fitted for a juvenile training school and ought not to be sent to an institution like your State Reformatory, may be sent to the intermediate reformatory for special training.

For years we have been urging New Jersey to provide a reformatory somewhat like Shirley, where the type of training would be much like that provided in the best marine training school and the type of institutional building would be such as you would find in the best modern trade and industrial school. It is just such a place that our judges, who cannot bring themselves to send young men to a cellular institution, would be glad to send a number of young men who are inadvisedly placed upon probation at the present time in our modern cities.

Something must be done about these young men before it is too late. This is the viewpoint of such a seasoned and experienced person as Chief City Magistrate William McAdoo of New York City, former police commissioner of the same city. Hear what Will Colvin, the veteran Superintendent of the Pardon and Parole Department of the State of Illinois, says in his last report, which came to hand on March 17:

> Robbery while armed continues to furnish the crime problem of the present day. The youthful bandit with a large weapon, depending upon the firing of shots, excitement, the crashing of glass, and an automobile to furnish a ready means of escape occupies the stage of public attention.
>
> With youth running rampant, wild joy-riding, pool playing, pistol carrying, and shooting to kill upon the smallest provocation, the boy problem becomes more complex than ever before.
>
> Youthful disregard for law presents a problem to which

students of crime and thinking people may well give their attention. When a shot has been fired and life taken, it is too late to save the boy.

Increased punishment for the crime of robbery with a weapon has not served as a deterrent. Some other preventive must be found if we are to continue to live as a law-abiding people with respect for the lives and rights of others.

In the not far distant future, not only Illinois but the whole country must arouse itself and awaken to a crime condition already progressed too far. Then youth will be taught respect for the law. Until an intensive drive is made from one end of the country to the other teaching respect for the law, the boy desperado, robbing, shooting and killing will continue to hold the stage of present-day crimes of violence.

We are not satisfied with these results any more than you are satisfied with the results in Ohio, but I want to urge you to look forward to the future with a considerable degree of optimism. The public is beginning to realize that good health and welfare work pays, not only in lives and in family income, but also eventually in preventing tremendous increase in costs of government. At least forty-nine of our greatest insurance companies have demonstrated that every dollar spent for health and welfare work among their policy holders has paid them two dollars in return.

It is well that these problems should be considered from every point of view as you are giving consideration today and throughout the year in this wonderful state. We hope while this conference is going on to get a little clearer picture of how you are doing your work, so that we may make proper comparisons and proper corrections in our work in New Jersey.

It is especially gratifying to be here in Ohio State University and to note how it is reaching out to those who cannot afford the time or the money to attend here. The University is furnishing so many good things that it should not be enjoyed merely by students, many of whom are indifferent to their opportunities and the urgent call of this age. It is fitting that they should share these good things with those who are more worthy, because others are more appreciative and are probably capable of greater things than many of your students.

APPLICATIONS OF CLINICAL PSYCHOLOGY TO THE TREATMENT OF DELINQUENCY

C. W. Hoffman
Judge of Juvenile Court, Cincinnati, Ohio

The darkest pages of English and American history are those which record the treatment of dependent and delinquent children, especially the latter. Previous to 1899 the treatment of the child who transgressed the written or unwritten law, both in England and America, was so brutal and atrocious that at this time it appears almost unbelievable.

Since the enactment of the first Juvenile Court Act in Illinois every state in the Union except two has enacted similar codes. These laws have had for their purpose not punishment but that of so providing for the child that he may be educated and cared for as far as practicable in such manner as best subserves his moral and physical welfare.

Juvenile courts were organized under the *parens patriae* prerogative of the state, primarily for the sole purpose of saving children, from permanent dependency or of entering a criminal career, yet we find that 93 percent of the courts of this country have not functioned, because they have failed to provide themsevles with the facilities for diagnosis or treatment. The great fund of extant scientific knowledge in respect to the behavior of delinquent children has not been applied except in a limited number of jurisdictions. The studies which have been made in psychiatry and psychology have demonstrated that there are some children who, by reason of the supremacy of mental or physical forces, are unable to control their conduct and lives.

It is impossible through mere observation to discover the source of a child's misbehavior. Juvenile courts should utilize all that psychology can contribute in the search for causes of child delinquency and seek to discover the forces that make for evil; and furthermore, aid and assist the child to adapt himself to moral and social standards to which he must eventually conform or otherwise become an outcast.

It is of immediate importance that our minds be freed of the

conception that delinquent children can be cured of their conduct disorders by merely moralizing about their ailment or by the application of the rod or deprivation of liberty. "Delinquency is a disease," says Dr. Thomas W. Salmon, "that destroys more children than many of the most prevalent diseases of children known to the physicians." If this statement is true then the delinquent child is entitled to the same care and treatment as a child afflicted with any other organic or functional disease.

The symptomatic evidence of delinquency, either in its early or later stages, may be observed in the schoolroom in all but a negligible number of cases which finally come into the juvenile court. In all juvenile courts in which reliable investigations are made it is commonly found that the school records disclose that the delinquent suffered from retardation. The fact of retardation alone ought to be sufficient evidence of possible future delinquency to warrant a most intensive study of the child with the purpose in view of definitely ascertaining the causes of his retardation and thus preventing ultimately a conflict with society or injury to itself. "Retarded children," Dr. Ira S. Wile declares, "demand and deserve a thorough physical, psychological, educational, and social study with a utilization of all methods that thus far have proven themselves of value."

If it be conceded that the origin and basis of anti-social conduct cannot be determined by a brief period of observation on the part of untrained social workers or judges, and that the problem of delinquency cannot be solved by moralizing, the infliction of corporal punishment, or by imprisonment; if it be further conceded that the mental and physical forces that impel misbehavior are multifarious, elusive, profound, and discovered, as Dr. Southard once stated, only in human organism; and also that delinquent children must be studied and treated individually and not as a group, then is it not evident that this work cannot be accomplished efficiently by the juvenile court because of the inadequacy of its facilities for this kind of service and the legal impediments that constantly appear. The best work of the juvenile court in an increasing number of jurisdictions is extra-legal. The unofficial work ranges from 87 percent of all cases in some

courts to a minimum percentage in other courts. In the juvenile court of Hamilton County 96 percent of the cases are unofficial.

The tendency today is toward the elimination of any particular court procedure and it was with this end in view that the Juvenile Court Standards proposed by a committee appointed by the Federal Children's Bureau were adopted after prolonged discussion and investigation by four thousand or more social workers, scientists, psychologists, and judges. The standards germaine to the study and treatment of children are:

1. Social investigation should be made in every case and should be set in motion at the moment of the court's earliest knowledge of the case.
2. The minimum essentials of adequate study of a case of delinquency are: study of the child himself, including a physical and mental examination, a study of his behavior; developmental history; school career; and religious background. Study of his environment, including his family home conditions; an estimate of the essential causal factors responsible for his behavior; and in the light of this estimate, recommendations for treatment.
3. Psychiatric and psychological study of the child should be made at least in all cases in which the social investigation raises the question of special need for study and should be made before decision concerning treatment, but only by a clinic or examiner properly qualified for such work.
4. The clinic for study of the child should be a separate branch of the court or a separate organization fully available. The personnel required includes a physician trained in psychiatry, a psychologist, and one or more social investigators.
5. The physical examination should be thorough, and all the community facilities for diagnosis and treatment should be utilized. Physical examination of girls should be by women.
6. For rural communities facilities for study of the child may be provided through the development of centers in urban communities or through traveling clinics under the auspices of state boards or commissions or institutions.

If these standards are sound in theory and practical in application we must seek some agency other than the juvenile courts to work out the behavior problems of children. Dr. H. H. Goddard has said that "in the matter of delinquency the machinery for local control is very largely in existence at the present moment. The machinery is the public schools. We have already defined delinquency as failure to keep up with the requirements of the group; delinquency is thus a social fault, not an individual

one. The school must socialize its pupils but to do this the item of first importance is to know its material."

The public school is at present the only available institution equipped or capable of being sufficiently equipped to study and know the material that finally takes the form of delinquency. The Psychological Division of the Vocation Department of the Public Schools of Cincinnati, working in connection with the Truancy Department, takes care of practically all cases of truancy without court action. Juvenile court hearings in Cincinnati have all but ceased. Because the public schools, the social agencies, and the psychological clinics have taken over the administrative work of the Juvenile Court, we have today but one boy in the Industrial School at Lancaster and there has been no commitment to the girls' school at Delaware for three years last past.

It is imperative that educators assume the responsibility for the welfare of delinquent children. It is a problem of education and nothing more. The indispensability of the psychological clinic must be conclusively demonstrated; otherwise we will find children under the school age, as we now find them in many localities, in jails, workhouses, and other penal institutions.

COMMERCIAL EDUCATION

W. L. Moore, Longwood Commercial High School, Cleveland, Presiding

THE INTELLIGENCE QUOTIENT USED AS A BASIS FOR VOCATIONAL GUIDANCE

F. A. Harrison
Wells School, Canton

The adjustment of the individual to his present and future environment is one of the prime objectives of education, if not the real objective. Vocational guidance as an educational activity is a good medium for helping attain this objective. Many high schools now have well-organized vocational guidance departments; those that have not are "talking about it."

Intelligence testing and homogeneous grouping of pupils tend to aid vocational guidance. Following out one of the main objectives of the junior high school, exploratory courses approximating life experiences are offered in various subjects. A recent study shows 301 out of 379 junior high schools having such courses. Vocational counselors devoting full time, or teachers devoting part time to guidance are now found in most high schools.

As a result of study in vocational fields, guidance programs in schools, and testing and classifying of workers in many vocations, we know that not every pupil can be trained to be an efficient worker in just any vocation that might be selected. Much disappointment and loss is being avoided by abandoning, in a measure, trial-and-error methods in the selection of life vocations, and substituting instead scientific vocational guidance.

Through two decades of development, tests have come to such a degree of perfection that great reliance may be placed upon them to discover human ability and intelligence. The measure of the intelligence of thousands of individuals, and the establishment of intelligence limits for the various vocations have been of great advantage in vocational guidance. For, notwithstanding the fact that the possession of certain natural or ac-

quired aptitudes plays a prominent part in successful vocational activity, there is reasonable certainty that the intelligence test has a high predicative value in vocational guidance.

THE SOCIAL AND ECONOMIC NEED FOR VOCATIONAL GUIDANCE

D. W. Sollenberger
Roosevelt High School, Dayton, Ohio

In years past we have been conserving natural resources and have recently turned our attention to human resources; mainly health, life-saving, and prevention of accidents. But we need also to pay attention to the psychology of success, which pays large dividends in itself. We must stop schooling our boys and girls in failure. They must have instilled in them confidence, a vision, a definite air, and a life motive. They must appreciate themselves and their own opportunities, for pleasure in labor must be their largest return of service.

In this age we find a growing economic dependence of the group upon the individual. We should, therefore, find for this individual or help him to find that work which he can undertake with the greatest possibility of success.

In planning our program for vocational guidance we must not fail to recognize the following facts: (1) 80 percent of all people engage in industry at some period of life; (2) 70 percent of all the men in cities came from the farm; (3) 25 percent of the people remain at the work for which they were originally trained; (4) 50 percent of the boys and girls give promise of making good in any line of work; (5) 70 percent of the people do not remain in the community in which they received their education, and (6) 90 percent of all girls become home-makers eventually.

The chief aim of vocational guidance is that it causes people to think of plans and possibilities of life. It should postpone decision until the youth is more mature and emphasize the need

of further education from the standpoint of money, morals, and social values.

The big end of guidance is to mold the lives of students to the end we desire. Society is demanding self-sustenance, proper social perspective, morality, civic responsibility, ability to use leisure time to the greatest advantage, a knowledge of the laws of parenthood, and a sound physical education.

One of the wholesome things about the work of vocational guidance information is that in most cases the choice of the pupil will change several times during the progress of study, showing that there is some actual thinking being done.

The kind of guidance which is most needed, after all, is the kind that will keep the child in school longer. In fact one valuable result of vocational guidance would be to point out the need of lengthening the school year and day for all but the incurably dull and permanently unambitious.

Educators must take greater stock of the social product of the schools, they must give more attention to the "by-product." Our schools must train for active and helpful membership in society and must assist students in cultivating mutual dependence. We must emphasize the proper mental attitude of the worker toward the job and must prepare him for the different processes of adaptation.

Today the turnover of labor is a grave problem. The following facts establish the premises:

1. Statistics state that the turnover in the large shops and stores is as high as from 150 to 600 percent.
2. Fifteen percent of all the employees of the General Electric Company were new in one year. A capacity of 8,128 workers demanded that 44,365 workers be engaged at a loss of $775,000.
3. The recent Ford turnover of 416 percent cost $2,000,000.

The aim of our vocational education program must be to give education and "end view" work, but we must add to this, through vocational advisors, information to parents and children in regard to trade and industries and the means of entering them.

Vocational guidance is a part of the movement to eliminate waste caused by drifting from job to job, and from school to

school. It introduces the idea of fitness of the individual for employment as well as the fitness for the task and it appraises the occupation in terms of the career values as well as the social values.

Much of the unrest that occurs in industry is due to the fact that the majority of the workers see no future in their jobs. More of the unearned increments must go into the hands of the common people, if we are to insure the continuance of our social and economic state.

If we properly train and guide the millions of workers in America, they will automatically demand and help bring about most of the reforms needed, because they will be capable and worthy of better conditions and treatment. The added efficiency will enable us to step farther to the front as the leader of nations.

POSITION, PUPIL, AND PREPARATION

J. W. Smith
Woodward Evening School, Toledo

Education is the process of developing personality or individuality, the position being merely an environment for that development. Environment is not a creative force but an extremely important factor in developing latent tendencies. Efficiency is dependent upon the bringing together of the individual and the kind of work for which he is peculiarly adapted, the most cleverly devised methods of procedure being rendered ineffective through misfits in appointment.

Positions come as the result of the requirements of business and are not the product of the school. The school merely meets these requirements. Our duty is to teach pupils through subjects rather than to teach subjects to pupils, selecting such training as will develop their highest possibilities. Guidance in selecting courses according to adaptability of pupil is a part of the teacher's business. Pupils should not be expected to do more or less than ability will permit.

The business world is calling for the highest types of service, so that our commercial departments must not be considered the favorable dumping ground for pupils of low intelligence or of undesirable habits.

Adaptability of pupil to commercial work may be determined, in some degree at least, through various systems of mental testing, elementary business training through certain subjects in upper grades of elementary schools, and greater interest in pupil both at home and in the school.

Many commercial teachers lose sight of fundamentals in an endeavor to provide expert service. The school is not called upon to turn out a finished product, but to furnish young people whose adaptability has been proved through successful mastery of fundamentals. These fundamentals still consist of spelling, penmanship, ordinary business correspondence, and basic principles of arithmetic, with definite training in promptness, regularity, neatness, accuracy, pleasing personality, and a desire to serve. Later, we should add commercial law, principles of economics, business psychology, and the art of salesmanship.

With these fundamentals as a background of commercial education, the routine work in bookkeeping and shorthand will be carried on the more easily. Our courses should carry a greater inducement than the mere chance of becoming a bookkeeper or stenographer. A recent survey of commercial occupations in Toledo disclosed a greater number of failures through deficiencies in personal qualities than in lack of training.

The teacher is the controlling factor in the school. Mere knowledge of subject matter of course as outlined is not at all sufficient. First-hand contact with practices of modern business is essential. Courses should be prepared by teachers who have had much business practice or by business experts who fully understand the problems of the classroom.

The placing of a pupil according to his adaptability is of exceedingly greater importance than the salary paid. Satisfactory service is the determining factor in salary adjustment.

COUNTY SUPERINTENDENTS

H. E. Hall, Wood County Superintendent, Bowling Green, Ohio, Presiding

FUNDAMENTAL OBJECTIVES IN THE CURRICULUM

O. G. Brim
Ohio State University

The idea of the curriculum as being so many subjects to be studied or facts to be learned is being supplanted by a belief that we should think of the curriculum in terms of vital, meaningful experiences. Education is worth the difference it makes in the intelligent behavior of the one who is being educated. Education is useless unless it secures for the individual a reorganization of his point of view, a better adaptation of his conduct to his present environment and a greater likelihood that further readjustments will be made when needed. Such an education is the fruit of real experiences not of the usual formal school work.

These experiences must not only be personal and meaningful, they must be fundamental. They must serve as a basis for introducing the child into the world of larger meaning, of greater reach, and of deeper social significance.

Education for most people and for children especially is primarily a "doing" not primarily a "learning." This curriculum of vital experiences should be centered about the life activities of children.

If now we look upon rural-school situation from this point of view we may see its possibilities. The rural child's life abounds in experiences that are or may easily be made real and vital to him. They are personal, varied, and fundamental. In his little world most of the major activities and interests of modern civilization are represented by slender threads. By a little thought these could be made the basis of a rich, unfolding, socializing experience. If learning centers around pupil activities then rural life is, in this respect, the child's educational heaven. Practically he

is free to utilize the resources of his world and to manipulate them at his will, in order to carry out his plans. Rural environment is the rural-school library and laboratory. It is due alone to our shortsightedness that we have limited its use largely to agriculture and nature study.

It is the task of the present leaders in rural education to weave into a unified course of experiences the child's in-school and out-of-school activities. The out-of-school activities will give reality to the in-school work. The contents of books and the activities suggested in school will stimulate a richer, more meaningful, and effective out-of-school life. To separate the two is to promote a wrong conception of the purpose of education, to misconceive the nature of the learning process, and to sacrifice the child. To effectively unite the two will be to give the country child a type of education superior in many respects to the best that can be achieved in the city.

OBJECTIVES IN ORGANIZATION

S. K. Mardis
Ohio University

We hear much these days about objectives in education. These objectives should not be arbitrarily adopted. It seems to me, they should be in harmony with our governmental objectives. A study of the ideals of the founders of our government and a study of the political documents of those days will give up the objectives that will be beneficial to our educational institutions and the government.

The Declaration of Independence gives us the great fundamental principle of equality of opportunities. The preamble of the Constitution of the United States gives us most clearly six objectives or purposes of government. The Ordinance of 1787 states that, "Religion, morality, and knowledge, being necessary to good government and the happiness of mankind, schools, and the means of education shall forever be encouraged." The constitu-

tion of Ohio says, "The general assembly shall make such provisions by taxation or otherwise as will secure a thorough and efficient system of common (public) schools throughout the state." A thorough and efficient system of public schools throughout the state is the educational objective of Ohio.

Ohio has three administrative classes of school districts—the city, the exempted-village and the county school districts. The organization of the city and exempted-village school districts are almost ideal in simplicity of organization. They are unified school districts. Each has but one board of education to levy the taxes and elect the superintendents and teachers, and to perform all the functions of a board of education. This gives efficiency. On the other hand the organization of the county school district is antiquated, complicated, inefficient, and expensive. My discussion will be limited largely to the county school district.

The County School District

The *New School Code of* 1914 created the exempted-village school district simply by giving the boards of education of villages having a population of 3,000 the privilege of withdrawing from the jurisdiction of the county board of education. The new school code did nothing with the city school district except to make the city superintendent of schools ex officio, a member of the city board of school examiners. The supreme object of this law was to improve the rural schools. To this end it created the county school district which is by creation a rural-school district and every school in the county school district is a rural school and nothing else because the industries are rural. It is incorrect to say "village and rural schools" we should say "village and other rural schools." The county school district includes all the schools of the county except the city schools and exempted-village schools. Another great thing the school code did was to form a county board of education composed of five members, and to give as one of its duties the election of the county superintendent and his assistants. The next important thing was to require professional training of the rural or county teachers. The city teachers were not included.

Seven Hundred Thousand Dollars Wasted Annually

It was the original plan to create the county school district as a unified school district or with the county board of education only for the county school district, but educational sentiment was not far enough advanced for this, and as a result Ohio is losing $700,000 annually because of inefficient county school organization. Ohio has in the whole state 1,300 township school districts, 522 village school districts within the county school districts, 405 special school districts making in all 2,227 school districts each having five members, thus totaling 11,135 members of the boards of education in the county school districts, exclusive of the 440 members of the county boards. Each of these local boards has a clerk which makes 13,362 school officials exclusive of the county school members. Checking up the laws, it is seen that the overhead expenses of these boards of education amounts to practically $700,000 annually. Since the county boards of education can do everything these local boards do and do it better and more efficiently, Ohio is paying out this large amount of money which is worse than wasted, because the small school districts, and the small tax units of varying value makes an inequality in taxation that is unfair to the taxpayers, and a great injustice to the school children. Ohio can never have a thorough and efficient system of public schools throughout the state as required by the state constitution until each county school district is unified. The city school districts had the same obstructions when each ward was a separate and independent school district, but this was removed in 1847 by what is known in history of education as the Akron Law. Since then the cities have gone by bounds and leaps in educational advancement. A study of illiteracy shows that practically all the native illiteracy has originated in the rural-school districts in the nation and also in Ohio.

The conditions exist in the county school districts because the educational sentiment is low. We lack an intelligent, business, educational sentiment, largely because the large majority of the teachers in the county school districts are not interested in the rural conditions. They know nothing about them and care less, because they have not been trained for county school work. City

sentiment has dominated our educational institutions, including the rural schools for half a century or more to the great detriment of the rural institutions. The new school code was enacted specifically to improve the rural conditions.

The last state school report shows that it requires 36,975 teachers to fill all the public-school positions in the state, and that of this number 16,998, namely one-half, are in the county school districts. Counting the shorter tenure in the rural schools, we would be quite safe in saying that fully one-half or more of the new teachers go to the county schools. The state of Ohio must make greater and better provisions for training county teachers. No inexperienced teacher should be permitted to enter a schoolroom as a regular teacher without professional training including practice-teaching.

The last report gives the number of one-teacher schools as 5,961. There are so many subjects for the one teacher in such schools that one of two things should be done to lessen the work and lengthen the recitations so something can be accomplished. The schools should be consolidated which is the best, or the county schools should be organized on the 6-4-2 plan, retaining the first six grades in the one-teacher school, and combining the next four in a junior high school thus giving enough high-school work to have some value, and if possible to have the last two years included, but if not make a larger area for a senior high school of two years.

The following recommendations were made:

1. That a county survey be made, at once, to redistrict the whole county for tentative consolidation, according to communities, topography, and road convenience, ignoring present school districts.

2. That wherever practicable, the school be consolidated on ample school ground within easy walking distance for those living in villages.

3. That the schools be organized on the 6-4-2 plan, and that where consolidation is impracticable in the near future that the junior high school be located where the schools should be consolidated when they are consolidated.

4. That all the schools within the county school district, both elementary and high, be ruralized, that is articulated in both curriculum and teaching, with the rural, industrial, and social life, and that only teachers trained for such work be eligible for county schools.

5. That the next session of the legislature enact a law requiring the county boards of education to levy all the school taxes in their respective county school districts, and that they build all the new schoolhouses to save issuing bonds by having a county building program each year on "a pay as you go basis."

6. That the county boards of education elect all teachers in the county school districts.

STUDENTS' ACTIVITIES AS RELATED TO THE COURSE OF STUDY

E. C. Seale
County Superintendent, Lorain County, Elyria

For the purposes of this paper the term "student activities" is used to include a large number of activities, usually extra-curricular in which students participate in more or less well-defined groups, under more or less definite organization, and subject to more or less regulation and direction by school authorities. It is not our purpose to try to differentiate student activities from the regular curricular activities on the one hand from activities in which pupils are interested because they are members of the community on the other.

In order to get a definite body of fact from which some conclusions might be drawn a questionnaire was submitted to one thousand students in the rural and village high schools of Lorain County. The purpose of the questionnaire among other things was to discover, if possible, the kind of student activities in which the young people in the county engaged, and to find out the load which students were carrying in this field, to learn if there was any relation between the intelligence of the student and the num-

ber of activities in which he participates, and if possible to find some correlation between the number of activities participated in and the marks earned in the regular class work. The survey brought very forcibly to our attention the fact that there were throughout the county a very wide range of student activities. These activities fell under the following heads:

1. Athletics included basketball, baseball, football, track, playground ball, volley-ball, tennis, miscellaneous games, marching, and drills.
2. Literary pursuits included school paper, annual, societies, contests, debates, orations, readings, and dramatics and plays.
3. Musical activities engaged in were operas, orchestra, glee clubs, and chorus.
4. Administrative duties included student council, honor court, advisory board, athletic association, and class organizations.
5. Vocational activities were various: agricultural clubs, sewing clubs, cooking clubs, and Smith-Hughes work.
6. Social-service activities included the Y. W. C. A. and the Y. M. C. A.
7. Scientific activities included the radio club and the astronomy club.
8. Linguistic activities included Latin and French clubs.

Not all these activities are in existence in any one school, but the survey showed that in one school there were nineteen definite student activities, while in the smallest school seven were listed.

The conclusions and observations drawn from the survey as a whole are:

1. Student activities have developed without appreciably modifying the course of study either in content or program.
2. The evaluation by the rural public of these activities as a part of an educational program is making noticeable progress.
3. In order to make student activities contribute the most possible to rural life in education there should be a more complete integration of these activities with the school program.
4. There is need for securing wider participation in student activities and for determining the normal student load in this field to the end that a proper balance may be preserved between the academic and the extra-curricular requirements.

A reasonable program of student activities has a wholesome effect upon the school itself, in developing school spirit and enthusiasm without which no school can be a success. Such a program should stimulate work in academic subjects. They help to

balance the educational ration and promote intellectual vigor. In order that student activities may contribute the most possible to rural life and education there should be a more complete integration of these activities with the school program. *Non scholae sed vitae discimus.* We learn not for school but for life, has its application here.

The fact that we now consider certain student activities as extra-curricular does not constitute a valid argument against admitting them to closer relationship. Observation reveals the fact that many subjects which now hold important places in our curriculum were once outside the pale of the elect, and that any extra-curricular activity which proves its worth tends to become curricular. As late as 1870 science was considered an amusing pastime for students, was fostered by clubs and later admitted to the curriculum in good standing. Domestic science, agriculture, music, physical education, each with its own history crept in by way of an extra-curricular door.

There are many student activities which might very profitably be correlated with the course of study and credit given for faithful performance. Take the high-school paper as an example, anyone who has successfully piloted a high-school staff through the publication of a paper will agree with me that it represents a great amount of work, both for the pilot and the piloted. Gathering news, evaluating it, and writing it, financing the enterprise, securing advertising and subscriptions, reading proof, editing the various departments, writing the literary articles, gathering jokes and witticisms, and the numerous other details involved in the successful issue of a high-school paper furnish projects in English, business and finance equal to those furnished by any other subject to which similar time is devoted. The high schools of Lorain County have conducted this year an unique project in high-school journalism. The students in the various schools have without exception entered into the project with enthusiasm and I believe, with profit.

The only difficulty has been that in the small schools the burden upon the individual student has been rather heavy. I cannot help feeling that if this work could have been correlated with some course in English and credit allowed, the work on the paper

would have been better while the drain from the other work would have been less.

There is need for securing wider participation in student activities and for determining the normal student load in this field to the end that a proper balance may be preserved between the academic and the extra-curricular requirements.

The time was when the four years of secondary education were limited to half a dozen fundamental subjects, mathematics, Latin, history, science, purely academic. Today, however, we are attempting to crown the work of the elementary school into six years, while we are offering an ever-increasing array of electives to those of the upper six years. The student must be responsible for a fixed amount of academic work in order to insure his passing from grade to grade. If the pupil has a desire to participate in any student activities he must carry it in addition to the regular load.

The survey disclosed the fact that there was a very definite correlation between the number of activities in which students participated and the time spent on their regular activities. Those students who participated in the larger number of activities devoted the smaller amount of time to regular work. There were some individual exceptions to this but it is true for the group as a whole. The survey showed that quite a percentage of students participated in a few or no activities. In some cases this was due to the necessity of home work or to the fact that the pupil lived too far from school with no means of getting back and forth after school. In other cases it was due to the fact that the regular work required too much time, while in other cases it was due to parental opposition or to a lack of interest on the part of the pupil. In a few cases the question of health entered into it. An effort should be made to secure wider participation in student activities to the end that every pupil should be able to find a place in the scheme of things and be made to feel that he contributes to the life of the school in some way, however small. If these activities have an educational value then the entire student body should profit by them. Provisions should be made for them on the school program.

The survey also showed that in almost every school a few students carried the burden of the activities. These students exhibited qualities of leadership and initiative and were readily chosen by their fellows to carry on the extra work of the school. "To him that hath shall be given" applies here and with equal truth the other part of the proverb applies "That from him that hath not shall be taken away even that which he hath." May it not be true that a student who is not aided in developing those essential qualities will not merely fail to gain but will actually lose what powers he may have. We are facing the problem of determining what the normal extra-curricular load should be and of distributing the total over a wider range.

CORRELATION OF THE COURSE OF STUDY IN HYGIENE WITH COMMUNITY INTERESTS

HELEN M. RICE
Assistant Normal Director, Elyria

In preparing for this paper, a survey compiled by the Department of Health was sent to the teachers of approximately one thousand rural and village schools in twenty counties of Ohio: Ashland, Belmont, Butler, Champaign, Crawford, Cuyahoga, Gallia, Hamilton, Henry, Lake, Licking, Lorain, Madison, Marion, Medina, Pickaway, Portage, Preble, Union, and Wood. The expense was borne by the Lorain County Board of Education.

This survey included fifty-nine questions under the headings of condition of buildings, playground and apparatus, water supply and washing facilities, condition of toilets, heating and ventilation, hot lunch, etc. In addition, three questions of my own were added:

60. What practical results are you getting from the teaching of hygiene in your school?
61. What is being done to correlate the teaching of hygiene with community sanitation?
62. Do you have a Parent-Teacher Association? What has it accomplished in the improvement of school and community sanitation?

The results of this survey will be summarized under the following outline:

A. What has been accomplished:

1. *By the teaching of hygiene.*— Many report general improvement in personal cleanliness, the daily use of a toothbrush, ventilation of sleeping rooms, and bathing at least once a week. Increased interest has been shown in diet — less candy and meat — more fruit, vegetables, and milk. The most important result has been the large number of children who are now drinking milk, instead of coffee or tea.

2. *By the correlation with community interests.*— Only about 10 percent of these teachers of hygiene are making any attempt whatsoever to correlate it with community sanitation. Results materialize when the pupils apply at home what they have learned at school.
Lessening of the prevalency of disease has occurred in one community, by attempting to educate the parents through the children, i. e., the use of anti-toxin against diphtheria. Several teachers have secured correlation by leading each pupil to see his own need for sanitation on his home premise urging him to correct the unsanitary conditions; then saying a word to his neighbor, and offering his assistance. Many visible results for appearances' sake have thus been obtained. Water supply and sewage disposal have been discussed in a number of schools. Destroying breeding places of mosquitos, flies and typhoid germs, and Clean-Up Campaigns have been the results of hygiene teaching in some communities. In many schools, examples of poor sanitation are cited, and remedies are suggested. One teacher stressed the kinds of food children should eat, and the way to prepare it to get the most value from it. This same teacher spoke of the necessity of handling food with clean hands, keeping it covered and away from flies.

3. *By the Parent-Teacher Associations.*— Some of these associations have been vital factors in creating a community spirit. In a number of cases, they have furnished restrooms, bought first-aid materials, made the hot-lunch project a reality, installed new toilets and drinking fountains, furnished playground equipment, bought pianos, victrolas, moving-picture machines, cabinets, stoves and hot-lunch equipment. A few have made it possible for milk to be served at school, and one has built a new building. Two communities have raised money to replaster and paper the school. Some have drained and beautified the school grounds, dug wells, helped to establish pig, calf, and cooking clubs. One association has installed electricity in their school; another paid the cost of the removal of toilets away from the possible chance of contaminating the water supply.
All schools are not so fortunate in having cooperative associations. In nineteen counties, there are only thirty-three active associations. In one county of sixty schools, there are fifty-three organizations, and practically all of them are active.

B. What needs to be done:

1. Almost all schools could use some playground equipment.
2. There is no water on the grounds of some schools.
3. Many wells are in danger of contamination.
4. In a regretable number of cases, drinking water on the schoolgrounds has never been tested.
5. Drinking water is kept in uncovered containers in many schools.
6. Soap and towels are furnished to very few schools.
7. The unjacketed stoves in a number of schools do not have ventilating flues.
8. The walls of many schools need re-decorating, plastering or cleaning.
9. Double seats are still being used in a number of counties.
10. Only a very few schools serve hot lunches, or have the necessary equipment to do so.
11. Some do not have adequate daylight, and in many the glass area does not equal 20 percent of the floor area. There is blackboard glare in a large number of schools. Two schools do not even have blackboards.

So it seems that there is plenty of work yet to be done to make these schoolrooms comfortable, hygienic and pleasant places in which to work.

EDUCATIONAL AND INTELLIGENCE TESTS

A. R. Mead, Ohio Wesleyan University, Presiding

SOME BY-PRODUCTS OF TESTS

U. L. Light
Superintendent of Schools, Barberton

By-products may be defined as those materials which in the cultivation or manufacture of any given commodity remain over and which possess or can be brought to possess a value of their own.

Tests are instruments designed for definite purposes.

Through tests we attempt to deal with our material scientifically. Science always deals with one especially abstracted aspect of the facts. Qualitative elements are drained off; then quantitative elements are weighed and measured. It is much easier to ascertain what skills exist than to determine the value of skills to the individual.

Achievement Tests

First By-Product.—Improvement of the teaching act. Reactions to tests are as follows:

1. Recognition of fact that certain conditions exist.

2. An inquiry into the cause of conditions.

3. A feeling that after all teaching efficiency is measured by results.

4. A serious attempt to ascertain just what good teaching will accomplish.

Second By-Product.—Check on the judgment of the teacher. Ranking of pupils from the teacher's standpoint is a very complex problem. The tendency is to take into account so many pupil reactions, traits, and qualities that it becomes difficult to abstract some one special quality, skill, or ability and evaluate it.

For several years we have given the Pressey First-Grade Reading Tests to ascertain whether they are instruments reliable enough to be depended upon in ranking pupils in whatever ability

that test measures. These tests were given during the nineteenth and thirty-eighth weeks of the pupils' work in school.

The teachers were asked to rank the pupils according to their reading abilities. The pupils were then ranked by the tests and the coefficients of correlation computel by the Ayres' shorter method. The results are given in Table I.

Since the correlation in the I-B groups was higher than in I-A the question as to what extent judgment of certain skill is influenced by personal knowledge and association may be raised.

TABLE I

	No. of Pupils	Medians	Correlations
Grade 1-A			
Teacher A	15	18	89.7
B	11	14	80
C	12	16	48.5
D	38	15	56.9
E	21	20	55.2
F	9	19	44.2
G	29	19	70.8
H	26	14.5	20.5
Grade I-B			
Teacher I	34	11	50
B	19	5.5	70
C	18	5.5	65
J	46	9	81
K	40	9	68
L	36	9.5	79.2
F	16	9.5	91.7
M	33	4	71.6
N	30	7.5	76.4

Third By-Product.—A changed attitude on the part of teachers toward grades and accuracy of procedure in securing results.

Intelligence Tests

Through intelligence tests we have learned much about individual difference and vocational fitness, but we have not learned to evaluate the qualities in an individual that really count toward his success.

An intelligence test is a reliable instrument with which to dis-

cover and eliminate the unfit, but we will have to know more about an individual than his score in an intelligence test to account for his success. It may be that refined processes in testing will disclose the number, value, function, and relative importance of all the by-products involved.

SOME MATERIALS FOUND EFFECTIVE FOR REMEDIAL INSTRUCTION IN ARITHMETIC

J. R. Patterson
Superintendent of Schools, Bucyrus

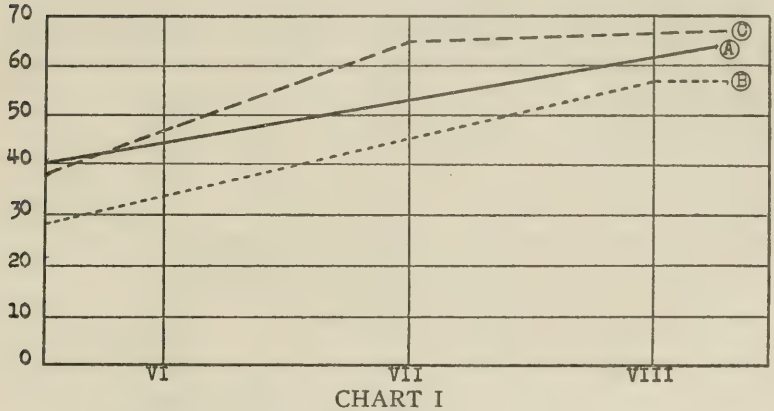


CHART I

A—Graph of Standard Medians
B—Graph of Local Fall Medians
C—Graph of Local Mid-year Medians

Chart I shows the arithmetic situation in grades VI, VII, and VIII of Bucyrus at the time of the mid-year survey the latter part of January, 1924, in relation to the fall scores of the same groups and to the standard scores. The tests used were the Monroe's General Survey Scale in Arithmetic. It would seem the improvement of mid-year scores over fall scores might not be altogether due to natural growth and routine arithmetic instruction.

We are hazarding the opinion that the improvement is more directly traceable to two things: (1) an analysis of the performances of the boys and girls in the full survey, and (2) a remedial program of instruction and drill set up in the light of the findings. It has been recognized for some time that the fundamental operations in arithmetic incorporate a large number of specific difficulties and prepare materials likely to overcome these difficulties.

The rest of my fifteen minutes was devoted to a display of some of these materials which I related to certain difficulties and told how they were used in class exercises. In our work in Bucyrus we have kept constantly in mind what seems to us to be two basic principles, first, any and all exercises set up in a learning situation must afford opportunity for a maximum number of child responses; and second, any and all exercises set up must be so arranged and constructed as to prohibit the giving of wrong responses.

DIFFICULTIES IN PROBLEM SOLVING

P. R. Stevenson
Ohio State University

The majority of children have difficulty in solving arithmetic problems. This applies to the simple problems of one and two steps as well as to the more difficult ones. Some of the important causes of failure in problem solving are:

1. Physical defects
2. Lack of mentality
3. Lack of skill in fundamentals
4. Inability to read in general or to read arithmetic problems
5. Lack of general and technical vocabulary
6. Lack of proper methods or technique for attacking problems
7. Lack of interest

Physical defects and lack of mentality are both causes of failure in all school subjects so I shall not discuss them at this time.

Lack of Skill in Fundamentals.—Lack of skill in fundamentals is a constant source of error in the work of bright, average, and dull pupils. A pupil may work a three-step problem by the correct method and fail to place his decimal point correctly in the last step. This error may make the answer wrong by a hundred or a thousand dollars. If the pupil's habitual reaction to 4 times 0 is 4 or 7 times 6 is 43, any problem containing these combinations is bound to be wrong.

Not only does the lack of skill in fundamentals cause pupils to make errors in their problems, but it also causes them to attack problems by a roundabout or peculiar method. For example, IV—a boy in working a problem requiring 15 to be subtracted from 30 made 30 marks, counted off 15, drew a line through them, and counted what was left. His answer was correct.

Inability to Read in General or to Read Arithmetic Problems.—The lack of general reading ability is a great handicap in solving problems. The correlation between reading ability and ability to solve problems is about 0.32. Pupils do not seem to think that they should read a problem carefully before beginning their work. Why should they, since they are not taught to read arithmetic problems? That the ability to read problems is different from general reading ability is shown by the high correlation of 0.78 between scores on a Reading Test in Arithmetic[1] and the scores on a problem test.

The following example was given to a fifth-grade class:

> When John was 13 years old he received $60 each year in equal monthly payments for spending money. How much did he receive each month?

One pupil divided $60 by 4 because there are 4 weeks in a month. Another pupil multiplied $60 by 13 and obtained $18.00. Still another divided $60 by 30 because there are 30 days in a month.

Lack of General and Technical Vocabulary.—Very often a

[1] The Stevenson Problem Analysis Test, published by the Public School Publishing Company, Bloomington, Illinois.

pupil fails to solve an arithmetic problem, because one or more of the words are unfamiliar. Children do not understand as much about the meaning of words as their teachers give them credit for. Not only are pupils deficient in general vocabulary, but they also are unfamiliar with the technical words used in arithmetics.

To show what concepts pupils have of words commonly used in arithmetic textbooks, I shall present the following definitions and illustrations of the word *area* given by pupils in grades v to VIII.

Distance around a thing, 6 ft. long x 2=12; 4 ft. wide x 2=4; 8 ft. + 12 ft.=20 ft.
Answer to subtraction problem, 3—2=1
How big or how tall you are.
Number of miles.
Means population.
Area is 55 feet below sea level.
Part of a wireless.

Some words have several meanings and are used in a technical sense in arithmetic. Pupils also have their own peculiar ideas concerning them. Seventh- and eighth-grade pupils gave some interesting definitions of the word "commission":

When you pay taxes.
Commission of the car is not very good.
Out of order.
When they let you do something.
Means to ask such as, "may I get a drink?"
What they charge to go to a show.
Something you are sent to do.
Something you pay for (commission in the army).

Lack of Proper Methods or Technique for Attacking Problems.—Few pupils have a technique or method for solving problems. They do not seem to know that a definite question is asked in each example and that data are given to help in answering the question. In order to learn something about the way pupils respond when presented with a problem, I tested fifty children individually. The questions of the tester and the responses of the pupils were taken down by a stenographer.

From a study of the questions and answers it appears that

pupils often decide from the form of a problem what process to use. Several numbers mean to add. One pupil's decision regarding one problem was that there were too many numbers to do anything else. In this problem—"Joseph rode a merry-go-round 12 times. Each time it cost him 3 cents. How much did he pay for all the rides?"—The pupil multiplied, because the problem said "times."

Remedial Measures.—It is possible to improve pupils' ability to solve problems. The following remedial measures have proved effective:

I. Teach pupils to read problems and develop a technique for working them.

In the assignment lesson have the problems read silently and teach the pupils to pick out (1) what they are asked to do, (2) what is given to answer the question, and (3) the process or processes to be used. (4) The pupils were asked to tstimate answers. Problems containing extra data should be used so that pupils will learn to pick out essential elements. Problems without numbers may be employed to help the pupil in understanding what processes should be used. For example, in the following problem there are no numbers to confuse the pupil and the thought may be focused upon what should be done:
"If you know the height of each pupil in your class, how would you find the average height?"

II. Teach vocabulary used in problems.
Have the pupils make a list of unfamiliar words from the list of problems. These words should be explained by the teacher or other pupils.
Have pupils state problems in their own words, in as many different ways as possible.
Special attention should be given to technical words such as rate, salary, percent, dealer, commission, etc.

III. Dramatize problems referring to measurements (pints, quarts, inches, feet, area, etc.)

IV. Give a large variety of problems from life situations. Have pupils make up problems dealing with their own or their parents' activities.
Attempt variety in the language of problems.
Make up problems centering around specific activities such as a field meet, a picnic, etc.

V. Give individual instruction.
Find out what the pupil needs and see that he gets it. For example, if he makes absurd mistakes, he cannot estimate answers, give him special instruction in estimating.

CLEVELAND'S TESTING PROGRAM

C. H. Mann
Division of Reference and Research, Board of Education, Cleveland

Achievement Tests.—Participation in the program of giving standardized educational tests in the Cleveland Public Schools is entirely voluntary, except as certain special surveys may be made from time to time. During the first semester of 1923-24, a large number of elementary schools joined in giving the initial and final tests in one or more subjects in order to measure the semester's growth as made by Cleveland pupils in reading, arithmetic, language, geography, and spelling.

Special Cooperative Experiments Involving Special Testing Programs.—At the present time, Cleveland is involved in a number of cooperative experiments among which are the following:

1. A comparison of the efficiency of the departmental and the regular form of organization in elementary schools. This experiment is being carried on at the Murray Hill School in cooperation with Dr. B. R. Buckingham, Director of the Bureau of Educational Research, Ohio State University.
2. A study of the effect of class-size on achievement. In cooperation with Dr. P. R. Stevenson and Dr. B. R. Buckingham of the Bureau of Educational Research, Ohio State University. This experiment includes 32 classes in second, fifth, and seventh grades in thirteen schools.
3. A study of classification and promotion based upon a combination of chronological, physical, social, mental, and educational ages. In cooperation with Dr. Bird T. Baldwin, director of the Iowa Child Welfare Research Station, State University of Iowa. This experiment involves approximately 3,500 children in 5 schools.

All these experiments require special programs of testing, including intelligence tests and batteries of achievement tests, given usually at the beginning and end of each semester. The experiments are planned to cover two, three, or more semesters.

Intelligence Tests and Classification Into X, Y, and Z Groups—Classification into X, Y, and Z groups on the basis of ability in

the Cleveland schools was begun in 1920-21 under the direction of Dr. W. W. Theisen. An experiment was tried out with 1,000 pupils of I-B classes in October, 1920, and with pupils of the VII-B classes in all junior high schools in January, 1921. Objective data as to the appreciable differences in quality of work done by the various groups were secured, and the results proved so satisfactory that the policy of intelligence testing for the purpose of classification was extended to include the testing of I-B entrants, all pupils entering junior high schools, and all pupils entering senior high schools.

Classification has been carried on quite faithfully in elementary and junior high schools, and a beginning has been made in the senior high schools. The X, Y, and Z groups include approximately 20-25 percent, 50-60 percent, and 20-25 percent respectively.

In the I-B classes the tests are usually given at the end of the first six weeks of school, so that sufficient time has elapsed to permit teachers to form judgments regarding the ability of the children under their instruction. These judgments are given consideration along with the test scores. Where test results and teachers' estimates do not agree the child should become a subject for special consideration.

We are well aware of the fact that a single group intelligence test is not an infallible guide, and that it does not necessarily provide an accurate measure of the intelligence or mentality of the individual child tested. We also realize that actual educational achievement and progress in school work depend not alone upon mental ability, but upon such factors as health, physical maturity, home environment, social development, attendance, industry, previous knowledge, and the quality of teaching. It is, therefore, advisable to take into consideration, when available, results of educational tests and other pertinent data. Intelligence test scores should be the point of departure for detailed study of the child.

It is also important that the system of grouping should be flexible to allow for the easy transfer from group to group when

it is apparent that an individual has been misplaced, or that changing circumstances make such transfers advisable and desirable.

The corollary of classification on the basis of ability is a differentiation of the course of study to fit the needs and ability of the groups at each mental level. Classification must necessarily fail to accomplish all the desired changes expected as a result of its use unless it is accompanied by differentiation of educational treatment and a differentiated course of study both as to content and method. This is one of the outstanding educational needs of the day.

A start in this direction has been made in the Cleveland schools by Assistant Superintendent Bixby, in charge of elementary schools, and his supervisors, principals, and teachers. In September, 1923, tentative differentiated courses of study in mimeographed form were placed in the hands of teachers of grades I-III.

Some attempts are being made to classify pupils in the senior high schools, but as yet we are unable to point to any outstanding accomplishment along this line. The upper grades, especially grades XI and XII of the senior high school, are, of course, small when compared to any one of grades VII-X, and the enrollment in each of the upper grades is scattered through a rather wide range of electives, resulting in classes so small in some subjects that classification seems almost impossible. Furthermore, classification presents certain administrative difficulties, including that of program making, which cause many senior high-school principals to hesitate before so complex a problem.

One of the difficulties which stands in the way of complete classification in American schools from kindergarten to twelfth grade, and one which may serve to block the way for some time to come is the fact that graduation from high school has been considered by many as a sort of a passport to intellectual aristocracy, since evidence of such graduation must be presented to the proper authorities in order to secure permission to enter the sacred precincts of our universities and colleges. There are many who feel that to lower the standards of graduation would be a

grave mistake. As a result one question often raised is: What shall we do with our Y groups and Z groups when they have completed their twelve years of public school education? Shall we give all pupils, X, Y, and Z alike, the same kind of a diploma when their abilities to learn, and the things which they have learned differ so widely? Or shall we attach some sort of label of distinction by offering an X diploma, let us say, to one group, a Y certificate to a second, and a Z statement of credits to a third section of the graduating class? Without a doubt, this question is an important and pertinent one—a question which must ultimately be faced and answered. It is a question which bears directly upon the general theme of this conference, "Standards in Education." What are to be the standards of graduation from high schools, if classification on the basis of ability is carried through to its logical conclusion?

Furthermore, old standards of achievement, based upon the accomplishment of the mythical average pupil, will become obsolete. We have been satisfied with standards far too low, especially for the upper 50 percent of our pupils. We need new standards for groups of different mental levels, based upon actual accomplishments of pupils taught by capable, efficient teachers. Pupils must be brought to a point of achievement corresponding approximately to their degree of intelligence, or we shall stand convicted of failure to conserve the mental resources of the nation.

EDUCATIONAL TESTS, THE FOUNDATION OF EDUCATIONAL AIMS

C. S. Berry
Ohio State University

"Preparation for citizenship" is the aim of education in the United States today, as it was in Sparta more than two thousand years ago. When we note the difference in the immediate or specific aims of education in the two states, however, it is perfectly

evident that "preparation for citizenship" does not mean the same thing in the United States as it did in Sparta. For the immediate aims or objectives looking to the realization of a more general aim are in large measure an interpretation of the latter. This interpretation changes as the immediate or specific aims are modified. For it is in the struggle to realize the immediate aims and objectives that the limitations and possibilities of the individual are revealed. Hence in the long run anything that changes the immediate aims or objectives will be not without influence on the more general educational aims and ideals.

Educational tests and scales along with the research work that has accompanied their construction and use, have resulted in clarifying certain of the more general educational aims and in making specific and objective many of the immediate aims of education. In addition the attainability of these immediate aims and at what cost has been determined; their number has been increased, and their relation to general educational aims more clearly indicated.

The results of the use of tests and measurements are most evident in connection with the fundamental subjects taught in the elementary grades. The general educational aim of developing individuals proficient in reading, writing, spelling, and arithmetic has been clarified through the measurement of the achievements of adults in various occupations until we now have a much clearer understanding of the amount and kind of knowledge and skill necessary to proficiency in each of these subjects. The immediate aims have been made definite and objective by requiring a certain degree of skill or definite amount of knowledge, which can be measured, to be acquired before the individual attempts the next aim or objective. These immediate aims have increased in number as measurement has shown that the general aim can be more easily attained through a series well coordinated into immediate aims or objectives.

The superintendent of schools who selects certain educational tests and scales for use in his school system, by that very act, determines the immediate aims of instruction. For his teachers will

strive to prepare the pupils to make high scores in the subject matter tested. If the tests measure the less important aspects of the subjects, these, nevertheless, will be the ones stressed by the teacher. This is well illustrated by the results obtained by the use of a geography test in a certain city. One teacher whose pupils had not made a high score in this test, which aimed merely to measure the knowledge of certain facts, reported that she evidently had spent too much time in making sure that her pupils grasped the significance of the subject matter, but promised that in the future she would see that they spent their time in memorizing facts.

One cannot examine the many educational tests and scales that are now so rapidly appearing without recognizing that, as a rule, they do not represent the careful preliminary research work that characterized the construction of the most important earlier scales and tests which are now so generally used to measure achievement in reading, writing, and arithmetic. Since tests and scales are now competing with textbooks in determining the immediate aims of education, and since the advantage is with the test as it stresses only that which is definite and measurable, careful study and investigation are especially necessary to construct tests and scales that will measure the most significant aspects of literature and of the social sciences. For it is vital that in these fields a fundamental distinction be made between knowledge which may be regarded merely as scaffolding and knowledge which is to become a permanent part of the mental life of the individual. Evidently in these fields the specialist in the construction of tests needs to work in the closest cooperation with the specialist in subject matter; for there is not as much agreement here in regard to the immediate aims or objectives as in the case of the three R's.

But even if tests and scales were already developed that adequately measured the knowledge and skill acquired in the study of each of the elementary- and secondary-school subjects, much would remain to be done. For knowledge and skill acquired in school are soon lost unless motivated by proper ideals and attitudes that insure continued use and development after leaving

school. There is the danger that the very definiteness and clearness of the aims developed through the use of educational tests will cause the teacher to emphasize that which is definite and objective at the expense of attitudes and ideals, which are intangible and difficult to measure. In fact, until we have adequate measures of ideals and attitudes, it will be necessary to lay more emphasis than ever on methods of instruction. The test simply measures the achievement, but it tells us nothing about the means and methods used to reach that level of achievement. Yet the method used may determine the ultimate development of the individual. During the early stages of learning the score is not as important as the method of learning. In golf proper form is far more important during the early stages of the game than the score; for the former makes possible a greater ultimate achievement. We are not acquiring knowledge and skill merely for use during the school period, but chiefly for the fifty-year stretch that lies beyond. As Courtis has repeatedly pointed out, the elementary-school subjects may be so taught that along with the increase in skill and knowledge the powers of self-direction, self-appraisal, and self-control will be developed. Yet, on the other hand, they may be so taught that there is little or no development of the latter, although the results as measured by standards tests may be the same in both cases. Certain eastern colleges lament the fact that many of the secondary schools are merely preparing their students to pass college entrance examinations instead of seeking primarily to develop their intellectual powers. It is the definite objective aid that makes the appeal. Great is the need of extending tests and measurements to cover attitudes, ideals and interests in order that some of the most vital aims in education may not be neglected.

EDUCATIONAL AND INTELLIGENCE TEST DEMONSTRATION

LUELLA C. PRESSEY
Ohio State University

The subject of the test demonstration was the use of diagnostic tests. Tests in arithmetic and English were used as examples. Emphasis was put upon the extensive research which precedes the construction of a diagnostic test. As illustration, the processes going into the learning of long division, and the handling of short column addition were used. The learning of the specific uses of capitals and punctuation marks was also demonstrated. The nature and structure of diagnostic tests was next indicated, using numerous tests now available as examples. This portion of the demonstration occupied about an hour.

During the second hour schemes for tabulating the results of diagnostic tests were demonstrated and methods of interpretation discussed. Several methods of recording individual scores were presented. Interpretation of the tabulations was especially stressed. Again, the main examples were taken from arithmetic and English. The last half hour was concerned with showing how remedial instruction may be based upon the scores made on a diagnostic test. Several devices for making remedial instruction easier—such as practice exercises—were demonstrated. The general notion of having a brief manual containing the facts that a child should know about a certain section of subject matter, and of having each child check in this manual the facts he did not know, was presented. It was emphasized that each child thus made his own textbook for the course—composed of things that he did not yet know—and that he might use this "text" as a guide to his own practice. Special emphasis was put upon the necessity of following up diagnostic tests with appropriate remedial instruction if the benefits of testing were to be realized.

The tests used as illustrative material were:

Osborn, Supervisory Tests in the Fundamentals of Arithmetic—several forms.

Pressey: Tests in Capitalization, Punctuation, Grammar and Sentence Structure, together with brief manuals for the guidance of pupils and teachers in eliminating errors.

Washburne: Spelling Books

Stevenson: Place Geography Tests

ELEMENTARY PRINCIPALS

JANE BRENTON, Principal, Harvard School, Toledo, Presiding

STANDARDS BY WHICH WE SHOULD JUDGE THE WORK HABITS OF ELEMENTARY-SCHOOL CHILDREN

MARGARET CONLEY
Principal Sands School, Cincinnati

Work is the means by which man has created civilization. Therefore one truth to be kept in mind in the process of teaching is that the learner himself must perform the labor, not the teacher.

It is the business of the elementary school to develop the ideal of industry. How shall we determine whether we are developing this ideal? Probably there is only one way and that is by their work habits.

We shall judge children's work habits:

By the attitude.
Whether they appear weary, languid, or in ill health.
By the manner in which they attack their work, that is, whether they make definite plans or otherwise.
By the willingness with which they begin to work.
By their mental stability.
By the amount of effort they put into their work.
By their attendance and punctuality.
By their attitude toward play and recreation.
By their self-control and control of not-self.
By their recitation and the way they express themselves.
By their ability to make personal decisions.
By their respect for authority, companions, and for the school.
By their pedigogical records and results of educational and intelligence tests.

We must bear in mind there is at the root of all advancement, work.

REMEDIAL CASES

F. W. Dearness
Principal, Sands School, Cincinnati

Ten minutes for remedial measures! "'Tis a signal that demands dispatch!" Many teachers are wont to inquire with some bitterness as to the profit from testings and standards if the results are simply tabulated and filed. In many cases it seems to be impossible to make any real use of the findings. This is especially true in small systems, where division into groups is hardly practicable. For all that, I believe that the ancient and honorable custom of allowing failures to "sit and do nothing" is happily obsolete. Resourceful teachers separate classes into "groups," after either scientific testing, or old-fashioned "sizing up,' and give to each according to his ability.

In the Sands School, Cincinnati, we have four or five "rooms" of each grade, and so are able to differentiate as to ability. Assignment to a suitable group, after diagnosis, is a "remedial measure." As my time is short, I shall give the details of one case, selected from many that would serve equally well.

Ruth is an interesting case and the story of our efforts to improve her reading is interesting, because the results were rather striking. She was assigned to a III-D class and was at the time 8 years 8 months old. She is well behaved and white.

In the Monroe Standardized Silent Reading Test I, Form 2, she made November 28, 1923, a rate score of 21, and comprehension, 2. March 4, 1924, rate, 65.8; comprehension, 5.

Let me tell the story in the teacher's own words:

Ruth is sickly. Her parents are separated much of the time, and she gets very little help at home. When she came she was about as the rest of the class, and not unusual in any way, except that she showed a desire to learn, and some power of concentration, which most of the class lacked. She used these "gifts."

I was unable to understand why children could read absolutely nothing when they had arrived at the eighth year of their age. To meet with pupils who did not know *is, at, on,* and *ball,* was

something new to me. I soon discovered that they knew very little of the alphabet, and they gave all sorts of sounds for the letters. They would give an *m* sound for an *o* or *p* or any other letter. Some of them did not seem to be able to learn words as wholes, or phrases; so I began giving daily written exercises on the alphabet, mixing the letters up. Then we sounded the letters until all the children knew them. Next we took daily drills on various phonetic families. I wrote on envelopes four families of sounds, and put on small pieces of paper words containing these families. These words were to be placed by the children under the right family. Afterward they copied them and recited them privately to me.

As each envelope was mastered, a new one was given. No two children had the same families in the envelopes. When they began to read individually to me, I made a hard-word book, and a phrase-book, covering the words and phrases with which they had trouble. Each child recited to me individually when he knew them, after which I wrote them on the board for all to read.

Ruth was given the First Reader. I did not hold back any pupil for another. Each moved from one group to the next as he was able. They could come to me at any time with their trouble, and I would help them to see the little word, family, or ending. Ruth finished two first-grade books and two second and is now in the Third Reader with ten other children. I did not develop any lessons of the first or second grades, but I am developing lessons from the Third Reader with the eleven children. We have had four or five lessons in the basic book, besides much other reading of equal difficulty. At first we ignored comprehension, and gave all our attention to the mechanics of reading. We would seem to have gained by the process, as they caught up rapidly when once the mechanics were mastered. Ruth has doubled her score in comprehension, and is over the median of the third grade. While she has also doubled her rate, she is still below the third-grade median. We mentioned some who scored 0 in November; these, in March, reached respectively 18, 27, 8, 10, 18. I regret to say that one remained at 0.

The class median rose from 36 to 53 in rate; and from 2 to 3 in comprehension.

In the University of Cincinnati, we have a Reading Clinic in which extreme cases are diagnosed and given treatment under the skillful direction of Miss Frances Jenkins. If time had permitted I should have been glad to give a report on a few of their accomplishments.

The Sands School is the headquarters of the Department for Blind and for Conservation of Vision. The care and assignment of the children of this department would furnish material for another paper on "Remedial Measures."

Similarly, our Open Air class for pre-tubercular children is remedial in the highest degree.

ELEMENTARY TEACHERS

Lou H. Thompson, Principal, Fairwood School, Columbus, Presiding

READING INSTRUCTION IN THE ELEMENTARY SCHOOL

William S. Gray
College of Education, University of Chicago

A short time ago the supervisors and teachers of Joilet, Illinois, prepared and published a chart entitled "A Tentative Reading Program." There are three characteristics of this chart which merit careful consideration. First, there is a list of important results which the teachers of Joliet hope to accomplish through instruction in reading. They are as follows: "Establishing correct attitudes toward reading, leading to permanent interests, and giving rich and varied experience; effective habits of thoughtful reading, and a mastery of the mechanics of reading." The supervisors and teachers of Joliet then took a second step which is very suggestive, they made a study of the kinds of instruction which are appropriate for each grade. Their conclusions are printed at the top of the columns for the respective grades. The third step was to list the teacher and pupil activities which are essentials in securing results economically and effectively.

The Joliet Reading Chart suggests a very vital question for consideration: What are the important things which we should attempt to accomplish through instruction in reading? The answer to this question depends, first, upon our conception of the main purpose of reading. As defined recently, "Reading is a means of extending experience and of stimulating the thinking powers of boys and girls." This view recognizes the large importance of silent reading. It emphasizes thoughtful assimilation by the reader rather than oral interpretation to others. Its ultimate aim, as Klapper has so well said is the development of ability "to translate the printed page into ideas, thoughts, motives, and actions which make for knowledge and efficiency."

An analysis of the uses made of reading in school and in modern social life justifies emphasis on three major objectives. They may be stated in the following terms:

1. Rich and varied experience through reading, resulting in ability to enter intelligently into the thought life and leisure activities of the world.
2. Strong motives for and permanent interests in reading that will direct and inspire the present and future life of the reader and provide for the wholesome use of leisure time.
3. Desirable attitudes and essential habits and skills, including (1) habits of intelligent interpretation; (2) fundamental habits in rapid silent reading and fluent, accurate oral reading; (3) habits of effective oral interpretation, and (4) skilful use of books, libraries, and sources of information.

In the brief time that remains for this discussion, attention will be directed primarily to methods which may be employed in various grades of developing habits of intelligent interpretation.

The primary purpose of reading instruction in the first grade is to cultivate a thoughtful attitude and the habit of looking for meanings in all reading experiences. Unless these habits are cultivated early there is danger that careless habits will be established and that progress will be slow and unsatisfactory in the later grades. There are numerous methods of cultivating thoughtful reading habits in the first grade. In the first place, the decorations of the classroom and its equipment may stimulate a desire to find out the meanings of sentences and paragraphs. Charts containing familiar verses, pictures with rhymes or descriptive sentences attached, bulletin boards, and announcements or directions, and the library table with its interesting picture books and stories are essential. The teacher who provides these things and tactfully directs attention to them stimulates keen interest in reading activities and cultivates the habit of looking for meanings.

In the second place, the early lessons that are taught determine to a large extent the reading attitudes and habits that are developed. The fundamental principle which should be observed in organizing early reading lessons is that the materials read must be intimately related to the experiences of the children and must be highly charged with interest. In order to illustrate the con-

tent and method of such lessons, a description follows of a reading lesson based on the activities of a teacher and class in providing a bowl of goldfish for the classroom. The teacher first told the pupils about the goldfish that she had seen down town and asked them if they would like to have a bowl of them for their classroom. All of the pupils were keenly interested and participated eagerly in the activities that followed. The teacher questioned the pupils to find out what was needed. The pupils suggested "bowl," "water," "weeds," "shells," "fish." The teacher wrote the words on the board, thus affording opportunity to associate them with the actual objects which they represented. She also attached cards to the objects as she mentioned them. After the pupils had become more or less familiar with the words, the teacher wrote directions on the blackboard. The pupils who recognized them first were permitted to do what was directed.

Get the bowl.
Put water in the bowl.
Put shells in the water.
Put weeds in the bowl.
Put fish in the water.

Later in the day, the children related their experiences of the morning and prepared the following account:

We have four gold fish.
We put them in a dish.
We put water in the dish.
We put shells in the water.
We put weeds in the water.
We named the fish.
The father fish is Dick.
The mother fish is Lassie.
One little fish is Weewee.
The other little fish is Weenee.

The story was hectographed and given to the children to read. Later, there was drill upon certain sentences and phrases which were to form a part of their permanent reading vocabulary.

After pupils have acquired a sight vocabulary of fifty or more words and have developed a thoughtful reading attitude, books may be introduced to advantage. The fundamental principle which should be observed in this connection is to select books for

use which contain interesting stories and information rather than exercises which provide vocabulary opportunities.

The technique employed in teaching children to read from books is as important as their content. In this connection, I wish to comment on one characteristic of the most successful first-grade teacher I have ever observed. I attribute her success to the fact that she takes such keen interest in each story read that every pupil under her instruction acquires some of her enthusiasm and reads eagerly and thoughtfully to find out how the story ends or to secure some interesting item of information. They are also stimulated by skilful questions which direct their attention from one point to the next as the story develops. Teachers who stimulate keen interest in reading and a thoughtful reading attitude, usually make rapid progress in developing habits of intelligent interpretation among their pupils.

Teachers are making wide use of silent reading in first-grade classes as a means of developing thoughtful reading habits. I visited a class in Buffalo, New York, about three years ago that was doing excellent work. The teacher first directed attention to the pictures at the top of the pages and asked several questions that stimulated the interest and curiosity of the pupils. She then asked them to read silently. They read the story, which was three pages in length, in about six minutes. The teacher then stepped to the blackboard, raised a map which covered a number of simple quesions and said, "What is the answer to the first question?" The pupils read and answered question after question. During the course of the recitation there were differences of opinion. The pupils re-read to secure a clearer grasp of the meaning or to find sentences which supported their views. There were interesting discussions, there were unusually good interpretations, and there was some reading aloud to prove points. During the period of ten minutes given to this part of the lesson, the class demonstrated clearly that they had acquired an unusual amount of independence and skill in interpreting the meaning of what they read.

There are several commercial devices available at the present time that are very effective in developing habits of thoughtful

reading. The Horn-Shields Silent Reading Flash Cards are excellent. They were organized for the purpose of securing meaning responses from children rather than the pronunciation of words. When a pupil looks at a sentence or a phrase, he responds by following the direction or by giving the answer to the question that is asked. This material can be secured from Ginn and Company. Another device is known as the Detroit Practice Exercises in Silent Reading, published by the World Book Company. This material includes excellent exercises, based on constructive activities, for use in training pupils to read thoughtfully. On account of the lateness of the hour, I shall omit further discussion of the problems of first-grade reading.

There are two radically different types of reading exercises appropriate in the second and third grades. The purpose of the first type is to train pupils to attack increasingly difficult problems in thought getting, in word recognition, in oral reading, and in other important phases of reading. These problems may be emphasized to advantage in the morning through the use of materials from basic readers. The purpose of many other exercises is to promote the establishment of habits that have been cultivated but which need further development. In such case simpler passages are appropriate in order that pupils may read widely and encounter few difficulties. This leads to more fluent reading, better interpretation, keener interest, and more rapid growth. One reason why pupils read so poorly in many classes is because they are assigned material that is too difficult for them. They are seldom given opportunity to read simple selections which challenge their interest and attention and which lead to rapid growth in thoughtful interpretation and in fluent reading.

In order to emphasize certain points in the technique of teaching reading in the second and third grades, I wish to present sections of two stenographic lessons. As I read the first, ask if it is a good or a poor lesson for the purpose of training pupils in habits of thoughtful reading.

Teacher: Let us read on the next page silently what the fox said. Right beneath the picture. And as soon as you are ready to read, put up your hands. All right, Gilbert.

The pupil reads.

T: Who can read that part better?

Another pupil reads.

T: That is better. Now there is an explanation part, and then the bear begins to talk. That will be John. All right, John.

The pupil reads.

T: Just a minute, John. Read that part once more. Read it silently first. Now, John.

The pupil reads.

T: And now the fox answers him.

If time permitted, I should read other parts of the lesson which show clearly that the teacher was absorbed primarily in the mechanics of the recitation and in keeping the class together as they read from one unit to the next. She directed attention to small, rather than large units, and she did practically all of the thinking. The pupils had little or no opportunity to engage in thoughtful discussions, to discover problems, or to aid in solving them.

In contrast to this lesson, I shall present part of another stenographic lesson report. The assigned selection, "How Fire First Came to the Indians," is a story with a strong element of suspense. In reading it for the first time, the child wonders how the Indians will obtain the fire, whom they will ask to help them, if the wolf will succeed in his undertaking, and if, with the help of the deer, the bear, the robin, the squirrel, and the frog, the wolf will finally get the fire for the Indians.

To aid the child in his silent reading, the following questions were put on the board for him to answer:

Who kept all the fire on the earth?
Why did the Indians want fire?
What animal did they ask to help them?
What directions did the wolf give to the Indians?
Whom did the wolf ask to help him?

Before beginning to read there was a general discussion, the children taking an active part. The principal points brought up were Indian life, how the Indians made their fire, the development of fire, and other stories of the origin of fire as told by the

different tribes. After the general discussion, the story was divided into such units as the following:

> The Indians decide to get the fire from the three old witches.
> The wolf promises to help.
> The wolf succeeds in stealing the fire.

As soon as the story had been divided into thought units, the pupils were called upon to read.

Alice says, "I shall read the part which tells that the Indians decided to get the fire from the three old witches." Following the reading, some of the questions asked by the pupils were: What is a council? What are lodges? What are Indian houses like? What does the word 'timid' mean?"

A careful analysis of this lesson reveals at least four advantages over the first: (1) It arouses intelligent interest on the part of the children. (2) It requires silent, independent reading. (3) It directs attention to important points. (4) It brings together useful information.

A somewhat different type of productive work is described by Miss Jenkins in her book entitled *Teaching in the Primary Grades*. Among other things she stresses the importance of discovering the central theme of a story, and of dividing a story into its main points. The first example is entitled "Finding the Heart of the Story."

> Every poem or story has a central theme about which the different parts are organized. Both understanding and appreciation of a literary selection depend upon the finding of this central theme. The conventional reading work of the schools is justly criticized because little is done to make this major purpose clear. Seldom does a lesson in reading concern intself with a large point of view.
>
> At times the title suggests the organizing idea. The teacher may well raise the question why the author has chosen such a title, but the answer can only be tentative until a careful reading determines its fitness. The Ugly Duckling is a good example of a significant title. Only when the story has been read can children see that the ignorance of the barnyard fowls caused suffering.

The second example is entitled "Separating a Selection Into Its Main Sections":

> So firm a hold has the sentence method taken upon our teachers that the sentence is made the unit of progress in a majority of our schoolrooms. "Read the next sentence" is the slogan which urges on each pupil day after day. A critic of our Sunday school says that the primary teacher so impresses upon the children the precept, "Always bring a penny," that later offerings never rise above the penny stage.

A second-grade class was reading the life of a little Eskimo girl. The section dealt with her playthings. "You may read all about one plaything," the teacher directed. Only two children in the group were able to do this without help, but every child was able to pass judgment as to whether the other read far enough or too far. After a few months of such training the class reaches the point, where, when a child is called upon to read, the teacher will ask, "How far will you read," and the pupil will be able to answer quickly and intelligently.

There are several similar problems which may be emphasized to advantage in the second and third grades. They are finding answers to questions, finding central ideas, finding a series of related big points, and dividing a selection into its major thought divisions.

Some of the important purposes of reading in the fourth, fifth, and sixth grades are to extend the experiences of pupils, to further develop habits of thoughtful reading and study, to increase the speed of reading and to develop skill in the use of books, dictionaries, and other sources of information. Time will not permit an adequate discussion of these problems. Therefore, I shall select two or three problems for brief consideration.

In an increasing number of schools a library period is provided each day during which pupils are sent to a library room where they read under the direction of a teacher. If a child encounters difficulty in finding interesting books, the teacher directs his attention to books or selections which she thinks may prove of interest to him. She also gives individual help to pupils in deriving meanings and in overcoming mechanical difficulties. Tests which have been given in schools following this plan show that library reading is proving very effective in increasing the child's range of information, his speed of reading, and his comprehension of what he reads.

In addition to library reading, there must be directed study of selections. At least two days a week should be used for class or group study of selections in which the activities of the children can be directed. One example will be given which describes a few characteristics of a valuable reading lesson. A fifth-grade teacher introduced a lesson one day as follows: "I have found a story in this book in which I think you will be interested. Turn to page — and tell me what the title suggests to you."

The title was "The Leap of Roushan Beg." One pupil raised his hand and said, "What was the leap?" Another said, "Why did he leap?" A third said, "Did he leap safely?" The teacher then suggested that they read to find the answers to these questions. The pupils read the story in about five minutes and then engaged in a spirited discussion of the answers to the questions. The teacher then made use of two devices which contributed materially to the success of the lesson. First she presented a series of questions which called for a clearer interpretation of the selection, than did the questions raised by the pupils. The answers to these questions provoked much discussion, leading to differences of opinion on the part of the pupils. Parts of the selection were re-read, arguments were presented in favor of and against certain views, and there were frequent summaries of points on which there was agreement. In a relatively short time the class had secured a clear understanding of the important points of the story.

As a second device for stimulating clear thinking and good interpretation, the teacher asked, "Which was the braver, Roushan Beg or Herve Reil?" The boys all thought that the former was the braver and the girls all voted for the latter. In order to prove their points, they studied both selections, choosing passages which proved that the one or the other was the braver. The pupils finally came to the interesting conclusion that each was brave in a way, but that the motive which prompted their actions was distinctly different. In my judgment, the type of reading and studying which the pupils did in this lesson was distinctly productive.

INCREASING READING ABILITY

Marie Ryder
Training Teacher, Dayton

The solution of the problem of "Increasing Reading Ability" depends on the answers to "Why do we read?" and "How do we read?" To the first the answers are many and varied each requiring, however, the comprehension of the printed page. Since more than 90 percent of the reading of adults is done silently, the answer to the second question is much simpler. The reading ability can be increased then by training the students to read silently and understandingly the English language.

It is generally agreed that in most cases a child's comprehension increases in the same proportion to his rate, that the more words he reads within a certain time limit the greater his understanding of the material read. After the rate has been ascertained by means of tests, the causes for slowness must be discovered, and remedial treatment applied.

A socialized recitation following a silent-reading lesson affords an excellent opportunity for aiding and increasing the comprehension ability of the individual. It enables each child to contribute to the interpretation of the lesson; it offers an opportunity for the examining, judging, and verifying of statements; it encourages the use of new words and phrases. This type of lesson necessitates numerous sets of books to insure a freshness of material and a sustaining of interest. It requires careful selection and timing of that material. It calls for a guiding hand to prevent the forming of careless habits in the reading and presenting of it.

This method of procedure results in a fuller comprehension of the content, whatever its nature, in the increasing of the rate, and in the development of an appreciation of skill in reading.

AN APPRECIATION LESSON FOR SIXTH-GRADE PUPILS

EMMA COOKE
Spring Street School, Columbus

The Aim.—The aim is to teach appreciation of good literature and also of good deeds.

Preparation.—The pupils have had the story of King Arthur and the Knights of the Round Table. A short review of these stories will be given as: How Arthur was chosen king. The Story of the Round Table and of "Seat Perilous." The names of some of the knights. What is a knight? Gallahad and some of his adventures. What was he seeking? What was the Holy Grail? How was it lost? Who obtained it and how? We will have some pictures pertaining to these stories.

Presentation.—Story of Parsival with pictures. Victrola selection from Parsival.

Comparison.—Of Parsival and his deeds with those of King Arthur's court.

Application.—For the children to be able to apply these lessons they have learned in everyday life.

ENGLISH

J. V. Denney, Ohio State University, Presiding

A PROGRAM FOR ORAL ENGLISH

Barbara Grace Spayd
The Morrison R. Waite High School, Toledo, Ohio

In planning a program for oral English the objectives and possible methods of presentation are as significant as the subject matter. My purpose is not to outline a course of study in oral English but to consider those activities that tend to develop abilities essential in the attainment of objectives. Accept as an ultimate purpose of education the development of abilities to enjoy the privileges, to perform the duties, and to meet the demands of life in a manner befitting the American boy and girl of today, and the American man and woman of tomorrow.

The program involving oral expression in the composition class, if determined by the interests and activities of youth, will include conversation, informal and formal talks, informal and formal debates. The extent to which the boys and girls, and the men and women in your community indulge in these forms of discourse will reveal the relative importance of each in your course of study.

We have been told that the art of conversation has been lost. One of the influences which is responsible for the character of the ordinary conversation is the recitation. In the English classrooms of our schools and colleges the art of conversation should be cultivated. Make it a part of your class procedure as so many teachers throughout Ohio have done. What is the result? The impedimenta of the "recitation" room, the traditional symbols of discipline and ceremonies that have created an atmosphere of formality, disappear one by one. The classroom is transformed. It has become "socialized;" it has become "naturalized." An atmosphere has been created that is vital. The old régime with its heritage of customs and book "learning" has not placed enough

emphasis on independent thinking. This new régime stimulates thought, exchange of ideas, and interest.

The conversational method changes not only the character of the class period, but also the character of the preparation during the study period. Studies which under the old régime had a separate, a remote existence distinct from life are interpreted anew in terms of and in relation to present-day activities. The accumulation of information remains an essential factor in the education of the child, but in addition a desire to interpret facts and to determine their relative importance is stimulated.

The place of the informal talk in the curriculum must be determined by the demands for such in the activities of the school organizations, the home, the church, business, professional, and recreational affiliations. This form of discourse has been developed to a high degree. The results obtained, the character of interests introduced, and the method of procedure should be scanned for the purpose of discovering relative values. A real situation that can be met best through the informal talk or address will stimulate real interest in this form of oral expression.

The oration and formal debate do not play so vital a part in the experience of our high-school students. Among them, however, are those who will be lawyers, ministers of the gospel, statesmen, politicians, and other public speakers. It is not our purpose to train our high-school students for a profession, a vocation, or an avocation—but it is our privilege to discover, if possible, any latent ability of which the individual is not aware and to offer opportunity for the development of natural talents that have been recognized. The question arises: Should everyone be required to deliver an oration and to appear in debate? The cooperation with other departments in the choice of subjects and content, the use of reference books in the school and public libraries, the organization and interpretation of the data gathered from these and other sources in the preparation of an oration or formal debate afford valuable training which, doubtless, justifies these forms of expression in our program for oral English.

We have been considering oral English, as it functions in the composition classes. It has its place in connection with the

reading of literature. Here new problems confront us, new questions arise, and new possibilities loom up. Conversation, the informal book review, oral reading, the story hour in the home, the library, and the elementary schools, and dramatization are mediums for the interpretation of literature. Of these, oral reading is one phase of oral expression which has lost prestige. In the elementary school it has been supplanted by silent reading. To be sure, there is not much demand for reading aloud in these strenuous days of the "movie," the radio, the automobile, and other means of rapid transit both mental and physical. In this era the amount of ground covered seems to be the important factor in determining values and popularizing activities.

With the passing of oral reading and the traditional Friday afternoon program of the little red schoolhouse, the strongest contact with the training of the speaking voice, which at its best was a mere groping in the dark, has been severed. In daily intercourse voices of pleasing tonal qualities are conspicuous because of their absence. The training of the speaking voice of *every* child should begin in the home and should be continued in the elementary schools, the junior and the senior high schools. It is just as imperative that this training be given under the guidance and supervision of a specialist as it is that the training of the singing voice be directed by a professional. Without a doubt such training will react advantageously in every department of our school system. One who knows how to use his voice effectively engages in conversation, in formal and informal address, in oral reading, and in dramatic interpretation more freely, more joyously, and with greater confidence.

In the present-day approach to the development of a curriculum we discover a similarity between certain underlying principles that control life in the school and life beyond its doors, the life of our boys and girls, the life of their parents, and that future life which we hope in our new régime will assume a more tangible aspect. That "the child is father of the man" is just as true today as it was in Wordsworth's day. If scientific investigation, so popular among educators, and our attempts at vocational guidance serve the purpose for which they were intended, we shall,

perhaps, be able to discern more clearly the man of which each individual child is the father and thus guide him more intelligently. In the preparation of a program for oral English let us remember that the child is living a part of his life today, that the new education demands the free expression of thought, that the collection of data, though very essential, is not an end in itself, but one of the initial steps in the attainment of our objectives, that thought is a determining factor in the revelation of the personality of an individual, that America's children must be prepared under a more natural, a more rational environment to enjoy the privileges and meet the obligations of life in a democracy.

A PROGRAM OF ORAL ENGLISH IN THE HIGH SCHOOL

Ruth J. Bradley
East High School and University of Akron

A program of oral English! Why have one and what shall it include? Because it is only within the last ten years that the oral side of language activity has come in for any appreciable attention, it is not difficult to understand why oral composition is still the Cinderella of the English family. "It is such a time-consuming proposition," someone ventures. "There is so much of a technical nature to be covered in our subject; college-entrance examinations clamor loudly for our time." All of which is more than true for in the words of a Japanese student who was in the throes of learning our language, "English is a subject in which *never forever* shall we arrive *somewhere anywhere.*" However, we as English teachers should be supremely grateful that it is our lot to be teaching the mother tongue today when far-sighted educators are laboring toward the democratization of the high school; when the ninety odd percent who are to enter industry are being considered before the more fortunate ten percent who are to enter college; when oral composition is coming to have preeminence over its less-used, but highly-lauded sister—written

composition; in a word, when an attempt is being made in the educational world to put *first* things *first*. When we consider that almost all work and play is carried on through oral language intercourse, it is a platitude to say that we must actually *train* pupils to use their mother tongue in the common language forms and activities; they will not learn of themselves unless their home environment is unusually fine. Despite the advance that English teachers have made, it is true that written language is still held up as the criterion of expression. We still hand to our visitors neatly arranged sets of compositions, notebooks wrought with painstaking care by students (and parents, I daresay), when the visitor, if he is alive to the responsibilities that are soon to fall upon the shoulders of the young high-school student in democratic America, would far rather hear a spontaneous, spirited, oral discussion, or a clearly-phrased explanation. Perhaps I have placed oral English on too high a plane; perhaps, after all, the value of the art of conversation, the worth of discussion, the utility of oral explanation and informal argument have been magnified, and skill in the making of a speech or the telling of a story is not to be so coveted as many of us have supposed. When I have experienced any grave misgivings about the amount of class time I have been giving to oral English, I have "checked up" on *my* language activities of the day and have been appalled to find how *much* I, as an individual, have talked and how very meager has been my written expression. This observation may be too distinctly personal but I suspect that a statistician could give us figures that would amaze us.

Granted that oral composition deserves a conspicuous place in any course of English teaching because of its downright, everyday usefulness, what shall we include in a workable program of the subject? Even at the risk of arousing the ghosts of dead rhetorics, I would venture the advice, lay them tenderly aside and substitute the more virile, life-affecting conversation and discussion, explanation, informal argument, speech-making, and story-telling. Of one fact we can be sure; these forms of language activity are democratic; they will be used by the ninety percent who labor "in the field or forest, at the desk or loom."

Let us forget textbooks and imitate life as we work out plans for the teaching of this oral work. Is it not possible for the teacher to *gather* a class about her, even though the chairs are firmly fastened to the floor, and open a conversation upon some topic that is of vital import to a large number in the group? Stimulated and guided occasionally by the teacher or an appointed leader, almost any class may become more efficient, more effective speakers. Often it is an excellent plan to use the group method of procedure in a large class. More students have an opportunity to talk in a given time; it is easier for them to speak informally and conversationally, when heads are together in mock round-table style and even reticent pupils will frequently respond and do really creditable work. Let the subjects be chosen by the class or a pupil committee under the direction of the teacher, but be sure that they are really alive. The day when every child wrote or talked on "How I learned to ride a bicycle," although sixty percent of the class had never felt the thrill of pirouetting down a city street on two wheels, is past; our composition subjects are now served *a la carte,* not *table d'hote*. It is not a difficult matter to prove to a high-school girl or boy the big dividends which a command of one's oral English will pay.

As a direct outgrowth from a free conversation period, one may expect a topic of discussion to arise. This is as it should be —this is life. Your conversations and mine lead to discussions. The class has not been of one mind on any issue,—"Should our city motorize its transportation?" Instantly the narrow-minded pupils, the bigots in the making unless our educational system can mellow and broaden their views, take sides with a tenacity that clearly bespeaks biased judgments heard at home. Here is our task. We must judiciously lead the class to appreciate the need of digging below the surface, of uncovering every possible root which may have a direct bearing upon the issue, of weighing their judgments before they actually formulate their opinions.

Just as discussion naturally follows conversation, so informal argument follows discussion. The days of formal debates in which only a few highly trained men participated is passing rapidly. Democratic education demands that we throw open whole

classes to informal debate, a give-and-take of sincere opinions formulated only after careful, thorough, and honest study. Not long ago, in a large junior high-school class that had just finished reading "The Man Without a Country," I tried throwing open a portion of the period to an informal debate upon the question: "Was Philip Nolan's punishment justifiable?" I was surprised at the result; at least ninety percent of the class had some worthwhile point to contribute; many of the arguments showed thought worthy of a much older student. We had no judges, we came to no definite decision, but I feel sure that we had a lesson in the necessity of proof instead of personal opinion, in the worth of courteous consideration for the opinions of others, and in broad-mindedness and fair play.

Of all the forms of discourse which have a truly social motive, explanation, I believe, can be made the most interesting, the most worth while. He who can accurately, efficiently and clearly explain anything, no matter how simple it may be, has taken a great stride in the direction of the mastery of his mother tongue. I know of no more interesting type of oral English period than one which is given over to pupil explanations and demonstrations of everything which the alert high-school student can devise. It is often surprising to find how glibly an ordinary self-conscious lad will talk once he finds a battery, a buzzer, and plenty of copper wire before him on the table. It *is* true that:

> It needs the overflow of heart,
> To give the lips full speech.

Boys, filled with the lure of scouting, have brought into the classroom hemlock boughs, saplings, and swamp grass, and constructed lean-tos as they talked; shy girls whose hearts were in their study of the violin have explained how the instrument was made, how it is fingered, and finally have demonstrated their ability in playing upon it.

Of the last two forms, speech-making and story-telling, I shall speak but briefly. Not one of us but had heard older persons say, "How I wish that I could have learned to stand up before an audience and talk when I was in school! Now I have a nerv-

ous chill when I even think of rising before a group." The type of speech that will be made in later life before clubs, church societies, governing bodies of towns and cities,—such speeches, not flights of oratory, would I include in a program of oral English. Nor would I forget story-telling, that age-old form of oral expression. All of us tell stories, more or less successfully, anecdotes, personal experiences, children's stories. Story-telling offers a splendid motive for the organization of a club where some very entertaining, as well as profitable work may be done. My program of classes once included a class of some twenty-five girls who, I could readily see, were not particularly interested in English. A story-telling club proved a life-saver here. Those girls told stories of every time and clime, they originated stories and tried them out on their small brothers and sisters at home to see if they would be as interested in them as in the stories taken from books, and finally they made arrangements to go singly or in groups to settlement houses, hospitals, and homes, to entertain children or grown-ups as the case might be. These girls actually came to see beyond the mere fun of entertaining others to the farther-reaching value of their gain in speaking their language and speaking it well.

Every age has its dominant characteristics. Acquisitiveness characterizes our day. Since we educators are aware of this, let us, with truly democratic purpose, bend our energies toward leading the young people to reach out for those things in English,—in school and in life, that are worth having.

A PROJECT IN JOURNALISM

Lucy Patterson
High School, Piqua

One of the problems which every high-school teacher of English has to meet is that of motivating the work in composition. Setting standards in written work may not be easy, but persuading pupils to make the effort necessary to reach these standards is much more difficult, and as a result all sorts of projects have

been suggested and tried. Among these projects the editing of a school paper is perhaps one of the best, if it can be so managed that more than a few boys and girls reap the benefit.

In one high school this has been done by making the two eleventh-year English classes responsible for a weekly page in the local paper, printed with a suitable heading and known as the "High-School Edition," of that paper. The work is so arranged that the members of one class write the editorials, while those of the other class take care of the news stories, personals, alumni notes, club activities, and the filler. Some of the pupils act as critics who choose the best articles; others write the headlines; and still others read the proof. Everyone who contributes to the paper in any of these ways has his name enrolled among the members of the "staff" for that week. The English teacher acts as copy-reader, and the typewriting classes prepare the corrected copy for the printer.

Primarily the object of all this work has been to publish a weekly school newspaper, but its greatest value has been the incentive for improving their written work, which it has given to from fifty to seventy-five pupils every year the plan has been in operation. Incidently the project is teaching the necessity of promptness in handing in the work, providing practice for the typewriting classes, and serving as a medium for bringing properly selected school news before the community as a whole.

READING WITH HIGH-SCHOOL FRESHMEN

Bertha Evans Ward
Hughes High School, Cincinnati

In the ten minutes allotted to me for the discussion of this subject, I must of necessity begin by limiting my subject. I shall, therefore, omit all generalizations about the subject and try to tell in a concise and practical way what we have been doing during the past two months with four freshmen classes—what objectives we have set for ourselves, what methods and devices we have used to realize these objectives, and what conclusions we

have reached as to the results. I say "we" because my work with freshmen has been done with two student teachers under the cooperative system of the University of Cincinnati.

The unit of our course of study for the period I have chosen to consider was as follows:

A. Group of Hero Stories
   1. Review of Mythology
   2. Story of the Iliad and the Odyssey
   3. Ulysses among the Phaeacians (Bryant's Translation)
   4. Sohrab and Rustum
   5. Reports on hero stories from the supplementary list

The major emphasis in this unit being upon the stories of the Iliad and the Odyssey, it was around these that we built our list of outside reading. "The episode, 'Ulysses among the Phaeacians,' shall be," we said, "not an isolated unit of intensive study but the center of a short reading course in the epic stories. Intensive study we must have, study based upon the text supplied by the board of education, but that alone is not sufficient. The pupil must be led to read for himself and to appropriate more than can be given in a series of class exercises." Our objectives, as we stated them, were as follows:

Information Objectives

1. Knowledge of Greek life and customs as shown in Homer.
2. A knowledge of mythology sufficient to make the reading of Homer intelligible and sufficient to carry over into other reading where such knowledge is necessary.
3. Understanding of necessary technical terms such as iambic pentameter, the Homeric similes, epithets, etc.

Appreciation Objectives

1. Emotional and intellectual appreciation of the epic form, language, style, and dignity of thought.
2. Entering through imagination into Greek life—experiencing it vicariously.

Habit Objectives

1. The cultivation of love of good reading.
2. Training in right habits of thinking.

In realizing these objectives our first step was to consult the library and to prepare a supplementary reading list assigning to each book its appropriate value in points. This was posted with

the encouragement to all to read widely but the necessary warning to the few to avoid undertaking too much. The credit system for reading, the honor roll upon which was entered the names of those completing any book or definite unit in a book, and the method of oral reporting which did away with tedious written reports, appealed to the class.

Inspiration to wider reading is so often a matter of personal influence. One casual conversation with a boy about a book you want him to read is worth more than any book list in the world. For this reason we arranged for a day of oral reporting. The two of us, supervisor and student teacher, with the aid of two good readers who had purposely been given their tests beforehand, heard personal reports while the members of the class not reporting were engaged in reading. Other methods of report were also used—brief written reports on certain reading, oral reports to class, dramatic reading of selected passages, impromptu dramatizations from the books read.

CONTEMPORARY LITERATURE FOR HIGH-SCHOOL SENIORS

LAURA V. EDWARDS
Glenville High School, Cleveland

1. Objectives to be gained by use of modern material.
2. Suitable material available for use: short stories, plays, essays, poetry.
3. Equipment: solving the problem of securing books.
4. Methods of presenting material most effectively.

LIST OF ENGLISH READINGS FOR GRADE XII-B

Rudyard Kipling — Born in India. Educated in England.
Early works: *Departmental Ditties* and *Plain Tales from the Hills.*
Lived for several years in America. Home in England.

Stories from Kipling., Phelps, Wm. Lyon, editor.
"Rikki-Tikki-Tavi" (*Jungle Book*)
"They" (*Traffics and Discoveries*)
An Habitation Enforced (*Actions and Reactions*)

Under the Deodars:
Baa, Baa, Black Sheep
His Majesty the King
The Man Who Would Be King
The Drums of the For and Aft
The Phantom 'Rickshaw
Wee Willie Winki

The Day's Work:
The Maltese Cat
The Ship That Found Herself
The Brushwood Boy
William the Conqueror

Life's Handicap:
The Mark of the Beast
Namgay Doula
The Courting of Dinah Shadd
The Man Who Was
Without Benefit of Clergy
The Incarnation of Krishna Mulvaney

MODERN SHORT STORIES

Atlantic Narratives—First Series
Atlantic Narratives—Second Series
Hamlin Garland, *Main Traveled Roads*
James Lane Allen, *Flute and Violin*
George W. Cable, *Old Creole Days*
Mary E. Wilkins, *A New England Nun*
Margaret Deland, *Old Chester Tales*
Margaret Deland, *Dr. Lavendar's People*
Edith Wharton, *Tales of Men and Ghosts*
Ellen Glasgow, *Shadowy Third*
Hugh Walpole, *The Golden Scarecrow*
Israel Zangwill, *Ghetto Comedies*
Leonard Merrick, *A Chair on the Boulevard*
H. G. Wells, *The Country of the Blind*
H. G. Wells, *Thirty Strange Stories*
Arnold Bennett, *The Matador of the Five Towns*
Algernon Blackwood, *Day and Night Stories*
Katherine Mansfield, *The Garden Party*
Sir J. M. Barrie, *A Window in Thrums*
G. K. Chesterton, *The Wisdom of Father Brown*
John Galsworthy, *Five Tales*
Thomas Hardy, *Wessex Tales*
W. H. Hudson, *Hampshire Days*
Archibald Marshall, *The Clinton Twins*

XII-B—ONE-ACT PLAYS

J. M. Barrie, *Half-Hours*
The Twelve-Pound Look
Rosalind
The Will
J. M. Barrie, *Echoes of the War*
The Old Lady Shows Her Medals
A Well-Remembered Voice

Lord Dunsany, *Five Plays*
The Lost Silk Hat
The Glittering Gate

Alfred Sutro, *Five Little Plays*
A Marriage Has Been Arranged
The Bracelet

Constance Mackay, *The Beau of Bath*
The Silver Lining
Gretna Green
Ashes of Roses
Counsel Retained

Leonard, *The Atlantic Book of Modern Plays*
Spreading the News (Lady Gregory)
Lonesome-Like (Harold Brighouse)
The Knave of Hearts (Louise Saunders)
The Land of Heart's Desire (Wm. B. Yeats)
Fame and the Post (Lord Dunsany)

Smith, *Short Plays by Representative Authors*
The Merry Merry Cuckoo (Jeannette Marks)
The Locked Chest (John Masefield)

Cohen, *One-Act Plays by Modern Authors*
Beauty and the Jacobin (Booth Tarkington)
The Maker of Dreams (Oliphant Down)
A Night at the Inn (Lord Dunsany)

MODERN PLAYS

1. Bennett and Knoolauch, *Milestones*
2. Shaw, *Pygmalion*
3. Drinkwater, *Abraham Lincoln*
4. Davies, *The Molluse*
5. Housman and Barker, *Pygmalion*
6. Dunsany, *Gods of the Mountain*
7. Kennedy, *The Servant in the House*
8. Pinero, *The Amazons*
9. Parker, *Pomander Walk*
10. Barrie, *What Every Woman Knows*
11. Barrie, *Alice-Sit-by-the-Fire*
12. Barrie, *Dear Brutus*
13. Wilde, *The Importance of Being Ernest*
14. Galsworthy, *Strife*
15. Galsworthy, *Loyalties*
16. Thomas, *The Witching Hour*
17. Fitch, *The Truth*
18. Milne, *Mr. Pim Passes By*
19. Milne, *The Dover Road*
20. Mackaye, *The Scarecrow*

CHIEF CONTEMPORARY DRAMATISTS—First Series
Strife
The Truth
The Witching Hour

CHIEF CONTEMPORARY DRAMATISTS—Second Series
Milestones
Abraham Lincoln

Modern Essays

Atlantic Classics—First Series
Gerould, Fashions in Men
Pepplier, Our Lady Poverty
Martin, A Father to His Freshman Son
Sherwood, The Other Side

Atlantic Classics—Second Series
Crothers, Everyman's Natural Desire to Be Somebody Else
Foster, An Indictment of Intercollegiate Athletics
Goodspeed, The Life of Adventure
Donnelly, In Praise of Old Ladies

Story, Essay, and Verse
Sedgwick, Athletics and Morals
Warner, Love's Minor Frictions
Crothers, The Evolution of the Gentleman
Rolfe, What Do Boys Know?

K. F. Gerould, *Modes and Morals*
Dress and the Woman
The Sensual Ear
The Remarkable Rightness of Rudyard Kipling

Richard Le Gallienne, *Vanishing Roads*
The Passing of Mrs. Grundy
The English Country-Side
Bulls in China Shops
London—Changing and Unchanging
Imperishable Fiction

Agnes Repplier, *A Happy Half-Century*
Our Accomplished Great Grandmother
The Perils of Immortality

Agnes Repplier, *Points of Friction*
The Beloved Sinner
Woman Enthroned

Agnes Repplier, *Books and Men*

S. M. Crothers, *The Gentle Reader*
The Honorable Points of Ignorance
The Enjoyment of Poetry

S. M. Crothers, *Among Friends*
The Hundred Worst Books
In Praise of Politicians

Wm. McFee, *Harbours of Memory*
Lost Adventures
The City of Enchantment

Hamilton Mabie, *Essays on Work and Culture*
The Pain of Youth
The Larger Education

W. D. Howells, *Literature and Life*
Confessions of a Summer Colonist
At a Dime Museum

Theodore Roosevelt, *American Ideals*
True Americanism
National Life and Character

E. S. Martin, *In a New Century*
Character and Money
Noise and Canned Food
Some Advantages of the Common Lot

Stephen Leacock, *Essays and Literary Studies*
The Woman Question
American Humour
The Amazing Genius of O. Henry

R. C. Holliday, *Walking-Stick Papers*
Why Men Can't Read Novels by Women
On Going a Journey
The Dessert of Life

G. K. Chester, *Tremendous Trifles*
On Lying in Bed
Some Policemen and a Moral

G. K. Chester, *What's Wrong With the World*

Robert Lynd, *The Pleasures of Ignorance*

Christopher Morley, *Plum Pudding*

Christopher Morley, *Mince Pie*

F. and G. Warner, *Life's Minor Collisions*

Mrs. R. C. Sturgis: *Personal Prejudices*
The Lost Art of Letter-Writing
Quality versus Equality
Husbands and Housekeeping

J. E. Park: *The Bad Results of Good Habits*
The Best Joke
Some Inexpensive Household Luxuries

Elizabeth Woodbridge, *Days Out*
The Tyranny of Things
An Unlovely Virtue
A Brief for the Hat

A. E. Newton: *The Amenities of Book-Collecting*
A Light Blue Stocking
A Word in Memory

A. E. Newton, *A Magnificent Farce*
My Old Lady, London
A Slogan for Booksellers

C. S. Brooks, *Journeys to Bagdad*
The Decline of Night-Caps
Hoopskirts and Other Lively Matter

C. S. Brooks, *Hints to Pilgrims*
I Plan a Vacation
On Dropping Off to Sleep

C. S. Brooks: *Chimney-Pot Papers*
On Going to a Party
On the Oifference Between Wit and Humor

Henry Van Dyke: *Fisherman's Luck*
A Fatal Success
Who Owns the Mountains?

Woodrow Wilson: *Mere Literature*

Ralph Bergengren: *The Comforts of Home*
The Perfect Gentleman

VALUE AND USE OF PERSONAL CONFERENCE

SADA A. HARBARGER
Ohio State University

Conferences, whether in business or politics, are generally recognized as a means of transacting business. They are the occasions for the presentation of matters of moment to those around the table. They deal directly with man-to-man propositions. The conference in English brings the teacher and pupil into direct and personal discussion of the problems which are concerned with the communication of the pupil's ideas for future professional and social relations. In the specified time set aside for conference the teacher can give each pupil individual attention and advice for improving his expression and maintaining and developing his individuality. The English conference is the place where the pupil can express himself directly and without the self-consciousness of class discussion. The conference is informal and conversational; it is the best method we have for giving individual instruction.

Yet to what extent is the personal conference now used in high schools? A survey made last month among 286 first-year students who come from 130 high schools in Ohio and 17 in other states apparently indicates that the personal conference is not at present widely used or recognized as essential to the English course. Only one-third—98 to be exact—reported a conference of any sort either directly concerned with or even remotely related to their English work. Of the 98, 50 indicate that they have had conferences throughout the four years in high school. The remaining 48 report conferences scattered here and there during the four years with the most noted in the third and in the fourth years, and the fewest in the second.

These conferences ranged from those which were "very few" and "very short" to "one a week the first year, one every month in the second and third years, and one every two weeks in the fourth year." In actual clock hours, they extended from five minutes to sixty, and in one instance to "as long as was necessary

to discuss the work we were having." The subject matter of these conferences included "reports on outside reading," "methods of reading," "outside papers and class compositions," "grammatical errors," "sentence structure," "thesis work," "personal mistakes," "advice on editing the school paper and the school annual," "daily papers," "dramatics," "notebook work." Some of these conferences were required; some, voluntary. Often the required ones were limited to those pupils who were doing poor work, and as a penalty, for some replied to the question: *Did you have personal conferences with your English teacher,*—"not unless you were almost a failure;" "every two weeks if the grade was below C."

Even when the conference was not a penalty for poor work, a number remark that time after school hours was required. "Books," comments one student, "were read and usually reported orally after school as a part of our year's work." So much, it would seem, had been demanded in English that additional hours had to be found to cover all the requirements. And where the conferences were not regularly required, there was evidently little attempt to help the good student improve. Unless he took the initiative, he was left to shift for himself, and natural diffidence and the fear of being thought by his fellows to be trying to ingratiate himself with his teacher, led him to be satisfied with mediocrity.

As nearly as I have been able to judge from the replies to my questionnaire, the conference has been entirely dependent upon the attitude of individual English teachers. It has not been a recognized or an accepted part of the regular teaching procedure for English. Since such a small percentage of the high schools includes the personal conference as a part of their method of giving instruction in English, it will be profitable to consider whether it is a desirable and effective means of strengthening the present teaching of English; whether it is valuable enough to plan definitely and include in the regular schedule; whether there can be any satisfactory substitute for it; and finally, whether it has any special uses.

Whatever the functions of the English teacher—whether to

direct the communications of ideas that the individual may have need to express or whether to familiarize the layman with good literature, to develop his critical judgment, push out the boundaries of his thought, arouse his appreciation—the English teacher must deal finally and necessarily with the individual as a separate and distinct member of society unlike any other, not as an unidentified member of a mob.

The great service that the personal conference renders to English teaching is in making this indefinite subject definite. English, in the mind of the pupils, is often an abstract study which has little future value and offers no immediate tangible return in money or in pleasure. Its very vagueness appalls them. It has no vividness. When they receive by radio the speech that has come from the lips of some speaker miles and miles away, they know how it has been transmitted and picked up by individual receiving sets. If they have broadcast messages, they have probably received "response cards" which indicate how their messages have been "coming in." When they broadcast their own ideas by word of mouth or in writing for English, they have had an indistinct understanding as to how their thought has been transmitted and how it has been "picked up" by the individual listener or reader. In fact, they frequently are not sure that there is any individual who "picks it up," understands it, profits by it, or enjoys it. They get no "response cards." As a result, their papers are aimed to meet a requirement, not to give voice to some burning thought of their own. They do not know what is wanted: they have little idea of the reader or of his interest and personality. They are writing to the world at large—"to whom it may concern"—or to the ones who imposes a grade, not to the one who is interested in their individual ideas; not to the one to whom they can talk freely and unafraid.

Even the fact that they may read their papers before their fellows does not always drive home the feeling that they have interested listeners. Often, they do not present their whole and inmost thought because of the fear of ridicule from their classmates or unsympathetic handling by the instructor. The following comments from some of the students in answer to the ques-

tion: *Were your papers discussed in conference, your reading or both* indicate some of the reactions to class discussion methods. "Papers were discussed mostly. The popular method was to have the student read his paper before the class who then picked it to pieces," and "papers and reading were discussed in class only. My teachers were personal in their criticisms in class." It does not take much imagination to see the author, when the class criticism began, wince or encase himself in criticism-proof armor. Then too, he probably did not have much sympathy or open-minded hearing from the members of the class all during the presentation of his ideas. if his fellows were to be graded upon the number of flaws that they could discover and run down. He would hesitate, therefore, to bring forth his finest and most intimate thoughts for the mob to "pick to pieces." He would hide them behind glittering generalities. Developing self-expression would be unduly restrained if not entirely repressed.

At the present time, the high-school curriculum is so crammed with formal subjects which occupy fully all the recitation and study hours that there is almost no opportunity to pursue any train of thought which a course may suggest to its outposts, or even to the byways. The pupil must remain on the regular routes with the majority. He would often like a little leisure to think, to take stock, to select certain thoughts, do a little adventuring upon his own initiative, then converse about them and compare them with the experience of others.

Personal conferences, therefore, reduce the weaknesses of quantity production in education and make for quality production —the raising of the efficiency and the effectiveness of the individual. The English department cannot offer instruction in composition and literature per se. It must offer the opportunities for perfecting articulateness in all subjects. Conferences not only aid in the development of leaders but also assist the average pupil in the fuller use of his one or two talents.

Since the conference is so important both for teaching and for discovering the vocational interests of the pupil, it should be regularly scheduled and substituted for at least one of the periods now given over to class discussion. Conferences should be re-

quired of all so that the strong as well as the weak may have the benefit, for the strong with a little direction will far outreach themselves. Seldom should the conference be made a matter of penalty—a period after a day in the school. The number of conferences for each pupil during a semester must, of course, be determined by the size of the class, the duties of the teacher, and the type of work that is being covered. As a general rule, twelve to fifteen minutes each time will be long enough, though it will be better to err by giving too much than too little time. It would always be well to take "as much time as is necessary to discuss the work we are having." Certainly, conferences should not be rushed. If the teacher is pushed for time, he ought to cut down on something else—paper work or class discussion—but not on the personal conference. Under no circumstances ought the pupil receive the impression of haste.

In a class of thirty, with the length of time suggested, it would take about a month to get around the entire class. This plan would permit about three a semester with each pupil or some forty-five minutes apiece each semester. Each conference should be planned with some definite point in mind. Here in the university, I call my first conference the "good will" conference. I direct it and use material written for the English class as the basis for my comments. The second, I designate as the "outside writing" conference; that is, I ask the student to bring to study with me some writing that he has done for courses other than English—examination papers, reports, etc. The third is the "outside reading" conference which may deal either with the assigned or with the voluntary reading of each student.

As preparation for the conference, each student is directed to go over his practice sheets beforehand and note the outstanding points both good and bad. In this connection, it will perhaps not be a digression to say that skilful, definite comments on themes are imperative. How is the pupil to know what is likely to be the trend of the discussion if "vague," "weak," "sentence" are the only suggestions on returned papers? How can he participate in an intelligent conversation upon his peculiar weak points, much less his strong ones?

The actual method of procedure in the conference is dependent upon the personality of the pupil and of the teacher. Its object is to develop the critical judgment of the student so that he will take an impersonal attitude toward his own work, forget himself, loosen up his thought, and see the need and the desirability of being articulate. It progresses through the touch and go of conversation. Though the basis is the written work, it need not be rigidly limited to this subject matter. English may use any subject for conversation. It is restricted only by the taste, knowledge, and experience of the student. The number of themes covered in any one conference should be few rather than many—perhaps only the typical one. The opportunity, of course, should be given for the student to ask questions about others.

After conferences, the wise instructor will take into the classroom for further discussion and analysis, errors, misunderstandings, that were common to all and concerning which each pupil is cognizant as an individual failing, and original thoughts in which the class will be interested. These give the right slant to the class discussion—not the occasion for "picking to pieces" the theme of some victim but the occasion for each member to contribute out of his articulateness his choicest thought on the topic under scrutiny. More of the pupil's attitude, experience and purpose come out in animated class discussion; the aim of the teacher is to guide individual expressions of opinion toward a unified summary and to stimulate further thought among individual members on personal ideas and interests.

The objection may be raised that there is not enough time for conferences in the present management of English courses. There is not. It is not a question of finding more time but of using what is already available to better advantage. The conference will only shift the emphasis; it will relieve the teacher of some of the tedium of paper grading. It is a better method of offering constructive individual criticism than by theme-grading. Theme-marking even at its best, is always correspondence-course handling and has the lack found in all correspondence course methods —the lack of the stimulating personality of the teacher. Under the most auspicious circumstances, unusual shrewdness of judg-

ment is required to help the individual at long distance. If theme-marking is to accomplish results and not to be actually a waste of the teacher's time, he must write on the paper more than the grade. He must put on sufficient comment to justify the grade. Detailed criticism with this aim requires more than the brief comments in red ink or with the rubber stamp. Yet teachers often expect to eradicate habits of errors and to stimulate the development of individual thoughts by a few brief, cursory comments that are never explained to the pupil personally.

The value of the personal conference is immeasurable; the uses are limited only by the attitude and the insight of the English teacher. It may be used to teach craftsmanship in writing, to teach appreciation of good literature, to make an indefinite subject definite, to create a desire for good reading casually and naturally, to develop the fine art of conversation, to stimulate a healthy and mutually helpful personal relationship between pupil and teacher, to give some direction to the aptitude of the pupil. Where a course is being given for the inherent information which it has to offer, mass teaching may be effective for the supreme idea is to impart measures of knowledge in special fields. Where the subject is expected to bring out the ideas which the individual acquires and uses as his stock in trade, and by which he "guides his life and risks his fortune," individual teaching adjusted and adapted to suit peculiar need is imperative. Definiteness in English comes best through the exchange of ideas—talking together, "giving and taking, comparing experience and according conclusions."

No other method of teaching English has the influence of the personal conference; no other method can replace it nor produce within the same amount of time equal results. It is the great means of adapting instruction to the individual.

THEME-MARKING: HOW MUCH? TO WHAT END?

W. W. Bissell
Central High School, Cleveland

Probably no part of the work that the average English teacher in our large high schools is called upon to do is less interesting than the marking of composition papers. Many teachers find this almost daily task positively drudgery. While I have the greatest admiration for the devotion of my fellow teachers who night after night, year in and year out, sacrifice opportunities for self-improvement and recreational pleasures to this spirit-dulling, inconspicuous task, yet I am coming to believe that some of this labor may be escaped, not simply because it is irksome, but because it is needless.

Recently an experiment was carried on in a number of the high schools of Cleveland to determine if the work of composition marking might be curtailed without loss in results achieved. A teacher in each of the several schools, with two classes of the same grade and approximately equal ability, in one class marked carefully all errors in the composition papers; in the other class she marked each set of papers for one definite type of error only, as, for instance, the comma-splice. At the end of the experiment, covering the greater part of a semester's work, the results were measured and showed that the pupils whose papers had been corrected each time for all errors had made as a whole somewhat less advancement than those whose papers had been corrected by the shorter single-attack method.

This and other successful experiments with time-saving devices, obviously, do not spell obsolescence for the blue pencil and red ink. They do, however, point significantly to a reasonable conjecture that many teachers in painstakingly marking all the errors of the mechanics of writing on every composition paper are devoting time that might better be used in broadening their outlook, adding vitality and freshness to their classroom work.

Apart from the expenditure of the teacher's time, another important consideration must enter into the question of how much

to mark. An over-scrupulously careful marking of all errors may react disastrously upon the pupil's desire to express himself for his teacher. I have known of at least a few parents who protested that the teacher in his desire to obtain grammatical correctness had stultified the child's imagination, discouraged spontaneity and sprightliness.

I am convinced that the day the pupil comes to look upon me only as a "sleuth," hot on the trail of every dangling participle and split-infinitive, that day will he cease to write for me anything which is fresh, genuine, picturesque, creative.

Our marking, then, whether or not we can use any of the shorter cuts, must be sympathetic, directed, for the pupil, always toward expression—not repression.

HIGH-SCHOOL PRINCIPALS' ASSOCIATION

E. F. Miller, Rayen High School, Youngstown, Presiding

A DEMOCRATIC SCHOOL ADMINISTRATION

V. T. Thayer

Ethical Culture High School, New York[1]

The Great War has resulted in a widespread re-examination of educational ideals and practices. In both Europe and America the democratic spirit has demanded a reconstruction of school curricula, methods of teaching, and even school organization.

Radical experiments in school administration are found in both Europe and America. Thus Frederick Roman of the United States Bureau of Education tells us that in Germany since the revolution the directors of schools have lost their autocratic authority. In Prussia the teachers now have a voice in determining the curriculum and methods of discipline and they are free to use their own methods of teaching. In Saxony the office of director in the higher, middle, and elementary schools no longer exists. The faculty elects a chairman who holds office for three years, assisted by a committee of from three to five of the faculty. Within certain limits the faculty decides upon the curriculum, hours of study and play, and methods of discipline. The faculty fills vacancies and no teacher may be dismissed without the consent of the faculty.

But interesting experiments are found in this country as well. One or two illustrations may be taken as typical. The faculty of the Ethical Culture School of New York is organized into a Council which also includes one representative of the alumni, the Parents and Teachers Association and the Board of Governors. This Council may recommend practically any matter for the consideration of the Board of Governors, and last year secured the appointment of a faculty representative on the Board of Governors, with full voting power—together with one representative

[1]Now at Ohio State University

respectively from the Parents and Teachers Association and the alumni.

The City and County School of New York has no board of trustees and no outside control. The faculty carries the entire financial and educational responsibility of the school; fixes its own salaries, selects its own members, elects its educational director, and determines the school curriculum and educational policies. The results at present are clearly an atmosphere charged with original educational thought and experiment, tempered by the helpful and searching criticism which none can secure from his peers.

A third type of a democratically administered school is the school organized and governed by representatives of parents and teachers. In all the schools mentioned student participation in school discipline is also a characteristic feature.

A complete account of democratic school administration would describe many interesting departures from tradition in the public schools. The test movement requires for its success the cooperative activity of teachers. More significant, on a wide scale, are the attempts at the cooperative development of courses of study. These beginnings will undoubtedly lead to an extension of professional responsibility, but, by and large, teachers possess at present little authority or responsibility beyond their classrooms. A Brooklyn principal recently waved aside a teacher who was attempting to call his attention to conditions she thought harmful, with the words, "Criticism from teachers is not permitted in this school." This incident illustrates only too well the difference that legally obtains between the principal and his teachers.

Why does this relation exist in a country that has clearly set before itself democratic educational ideals? The answer is found in the traditional relations of teachers and pupils. This is one of hostility and suspicion. True, it is often disguised. It is no longer open warfare as in the days of Ichabod Crane or the Hoosier Schoolmaster, but while the rules of warfare have changed the contest still goes on.

When the schoolmaster needed an assistant it was to be expected he should rule his subordinate much as he governed his

pupils. This fact, together with the rapid development of school systems and the necessity for securing even poorly trained teachers to man the schools led to the establishment of rigid rules and regulations which alone could secure uniformity of methods and subject matter, and continuity of procedure. But what was a necessity under early conditions may now operate to prevent the best contributions from teachers. We cannot expect it to create a profession out of teaching. Just as in the business world inferior money drives sound money out of circulation, so will an educational organization which fails to stimulate initiative and independence and creative ability drive from the profession those whom the gods have endowed.

But what concrete justification can we put forth for a more extensive development of teacher participation in the organization and the conduct of the school? The argument is made that it will effect beneficially the teacher, the principal, and the curriculum.

The essential consideration as regards the teacher is to provide conditions which will stimulate him to develop and exercise initiative and originality. The exercise of initiative and originality depend upon avoiding slavish adherence to routine habits. Two essentials for keeping "out of the rut" are contact with what others are thinking and doing, and contact with the wider implications of one's own work. It is for this reason that it becomes important for teachers to study their own problems in the light of what others are doing and thinking, *with the distinct purpose of modifying the work of their own classrooms.* Contact with the wider implications of a teacher's work can be provided by permitting teachers to cooperate in formulating many details of administrative procedure.

By assisting in the development of a teacher's personality the principal will enrich the quality of his own. Frank relations of *mutual* cooperation with his teachers will rescue the principal from that condition of lonely isolation which is frequently the chief prerequisite of his office. Moreover, by virtue of his central position, he will serve as a clearing-house for the information secured regarding the conditions studied, and his contact with

all departments will give him the balanced view which principals so frequently lack. According as the principal organizes study and research into the needs of his school will he acquire both a comprehensiveness of judgment and the confidence of his staff which is essential for wise administration.

The curriculum will profit from an attempt to democratize school administration. The objectives of secondary education cut across the subjects of the curriculum and require for their realization an interconnection of subjects which can only be secured by a mutual interchange of views between teachers as they prepare their courses of study. These interconnections are not secured merely when courses of study are written by experts, or the principal urges teachers to *correlate* material. They are realized only when the objectives of one teacher are known to another, when each teacher senses his own subject as but one figure in a larger complicated design.

But what plan is proposed? The answer to this question is found only in the concrete situation. If a principal takes his faculty into his confidence and states his ideal the response will be unmistakable. A good beginning is to ask teachers to state the problems of the school which call for study and investigation. Once begun the movement will grow of its own momentum. The conditions of its success are one with its richest compensations, frank and cordial relations with one's teachers.

These suggestions merely urge that principals practice with their teachers the principles they propose for dealing with pupils. The purpose of determining individual differences in the pupil is to find that unique something within the child which will generate dynamic power when confronted with the appropriate stimuli. So, too, it is the duty of the principal to deal with his teachers so that they may sense the joy which comes from freely dedicating oneself to a cause greater than the welfare of one individual, but nevertheless a cause which requires for its realization the richest development of all.

But in the last analysis it is on behalf of the child that we must make our final plea for a democratic school administration. He is the be-all and the end-all of our efforts, and the effect upon

him of the environment we create is the test of our honesty and our sincerity. If we are preparing him to exercise the democratic functions of citizenship, we should organize our schools so that in very truth they become a replica of democratic life.

WHAT IS THE MATTER WITH THE HIGH SCHOOLS?

CHARLES H. LAKE
Assistant Superintendent of Schools, Cleveland

If we are to consider the field of public education, I suppose we can pretty well agree that the education of the adolescent is the most pressing educational problem of the century in all of the more highly civilized countries, and especially in those under democratic rule.

In the nineteenth century the problems of elementary education occupied the attention of the educators. Methods of instruction were perfected that produced results that were undreamed of a few years before the battle of compulsory education was fought and won and many other progressive steps were made. The United States has led all the nations of the world in the extent of its compulsory education laws put into practice.

The character of secondary education is changing rapidly. Since 1890 the number of public high schools has increased from about three thousand to more than fourteen thousand and the number of all secondary schools has increased from about five thousand to more than sixteen thousand. The private and parochial secondary schools have not increased in number during this period. Within the same period the number of pupils attending all secondary schools has increased from three hundred thousand to more than two million.

Qualitatively this remarkable growth indicates that the high-school population has changed rapidly from a comparatively homogeneous and selected group to one which is very heterogeneous and which represents a wide range of social, intellectual, and economic strata.

The recent history of secondary education has been marked by two tendencies, the expansion of the curriculum and the attraction of larger proportions of the population drawn from successively lower social and intellectual levels.

As the curriculum has been expanded, a larger proportion of the population has been attracted to the high school, and as educators have studied this new group of pupils, they have expanded the curriculum to find material adapted to their needs and capacities. The two tendencies are reciprocally related.

Developments in our social ideals are paralleled to some extent by the developments in our public-school system. Most of the changes are inevitable. The active student of educational problems should be about two "jumps" ahead and be prepared for them when they come.

In the expansion of public secondary education to meet the varying needs and capacities of the pupils the studies first added were almost exclusively academic. Toward the end of the nineteenth century we included a few commercial studies and manual training. To these have been added, in the last twenty years, many subjects dealing with the practical arts, vocations, and the fine arts. We are now proceeding on a policy which calls for the inclusion in the secondary-school curriculum of almost any study suited to the needs of any considerable group of pupils.

It is possible to determine the comparative costs of the subjects in the high-school curriculum costs, but it is very difficult to determine the comparative worth of the various subjects to the individual pupil. Computed on the basis of pupil hour, the costs of the several subjects do not vary so widely, but when computed on the "unit of credit" basis, we find that the costs vary considerably. Shop subjects on this basis are quite likely to cost two, three, or even four times as much as the academic subjects. Are they worth this heavy cost when we consider the comparative value to the pupil?

The content of the course of study is of course very important in high-school work, but so much more depends upon the method that I wonder whether we can continue to advocate expensive courses in a wide range of subjects without taking most

careful stock of our resources. Content gives us our working tools, it is true, but method gives us our attitudes, not only toward our work but toward life. While no one would advocate the use of poor classroom material, still the teacher and the method are of vastly more importance. Nearly every teacher desires to be a good teacher. What are we doing to improve ourselves as teachers? What can we do?

To add to our troubles, we have the "Bing Law." It is the product of a group of people who have no adequate conception of the administration of education in a state such as Ohio. One must admit the absurdity of coupling two such words as "compulsion" and "education" when applied to the adolescent or later periods of youth. We cannot hope to build a stable and progressive state of society by compelling anything. A majority of those who are to be regulated must be in accord with and approve of the regulations under which they operate if the regulations are to be successful.

Administrators of education should more carefully study proposed legislation to avoid such situations as have arisen through the Bing Law. The absolute compulsory age should be reduced to fourteen years, with a period of fourteen to sixteen years which should be compulsory at the discretion of the school administrator. We are, however, trying to live within the spirit and letter of the law.

For the great heterogeneous group of pupils now in our high schools I favor a broad curriculum, but I believe that it will be better if we can differentiate our schools so that a certain type of school shall have quite a different curriculum developed to produce quite different results.

That is, while the range of subjects offered in the entire city would be wide, the range offered in a particular type of school would be limited to those subjects which seem best calculated to contribute to the development of the desired product as outlined by the purpose of the school.

Some time soon we may be able to say how much intelligence is needed to pursue successfully a given subject. The academic studies as taught at present require for successful accomplish-

ment an intelligence probably not lower than five points above average ability. What does this mean? Simply that unless the standard of these subjects be changed they cannot be undertaken satisfactorily by more than half of our American citizens.

Now probably no one will hold that this selective ideal shall be followed to the extent that only one-half of our children shall be considered capable of reasonable accomplishment in English, foreign languages, mathematics, science, and history. Everyone should know something about these subjects. We must grade the work and adapt the teaching so that the standard set for a particular class may be met.

The tendency now in many schools is to deflect or direct the pupil into commercial work when he shows a dissolution or an inaptitude for the regular academic work. Commercial work should not be considered an educational waste-basket for the high school any more than should the manual-training department. You cannot make a good stenographer out of a "dumbell" any easier than you can make a college professor out of him. My plan would be to cease all extensions of the curriculum in so far as new subjects are concerned. It might be a good thing to reduce the number of subjects offered, and spend the next few years in an attempt to vary the content in those subjects which we keep, and adapt the instruction to the varying capacities of the pupils.

There is only one other thing we can do and that is to limit the attendance in high school on the basis of some mental test. This seems impossible in a democracy. We must appreciate the fact that the two million boys and girls in the secondary school represent all grades of native capacity above the moron and a very wide range of educational need. Common sense demands that we either exclude a large proportion of these pupils or offer them an education which they can take.

The colleges are meeting this problem in the old way. They are applying the selective principle by elimination through failure. The colleges have limited facilities and their way is probably the best that can be devised under the circumstances. The ones they keep are probably worth a great deal more to society than the

ones they eliminate. The public schools will have great difficulty in using this plan extensively, although it has been used and probably always will be used to some extent.

We hear it said on every side that certain pupils are lacking in sufficient intellect to do the work required in this or that subject. I have very little sympathy with this theory. There is a limit, of course, beyond which they will not be able to make any considerable progress, but with a carefully graded course of study they can probably do about as well in one field as another.

Discussion

E. D. Roberts: The three papers just read, two practical, one idealistic; [1]two from the viewpoint of school administrators and one from the viewpoint of teacher present together a most interesting statement of the present situation of high-school education in our country. They represent a remarkable expansion and progress in this field within recent years. Two of them deal with costs upon a sort of mercantile evaluation basis, one referring especially to building costs. They refer specifically to the compulsory education law commonly called the Bing Bill and suggest the difficulties of administering it in high schools.

I feel that the public will be willing to erect costly school buildings if they feel they are serviceable and are meeting a definite need in the education of youth. The taxpayers are not committing themselves to a definite policy of curtailment in this direction though they are not seeking extravagance and expenditures for mere ornateness.

The papers emphasize the practical aspects of high-school education which bring us particularly to a study of the curriculum and supervision, both important and much considered fields of high-school organization in our time.

The idealism of Mr. Thayer is a wonderful stimulus to all high-school workers and the principles contained in this paper should underlie all consideration of the practical aspects of high

[1]Mr. Townsend's paper, "Some Tendencies in the Development of the High School," was not sent in.

schools such as the other papers contain. I question definitely whether the comparison with the situation in Prussia as quoted from Roman's recent book where a system of teacher control is described is very helpful to us. Democracy in Germany is too new and this particular experiment too recent for us to draw definite conclusions from it. On the whole it seems to me the principles of Mr. Thayer's idealistic paper are more easily applied in private schools than in public-school systems. This opinion seems to be justified by the large use Mr. Thayer makes of private schools. I am convinced that the Brooklyn principal who preferred that his teachers have no direct dealings with him is an instance possible because of the large organizations common in New York and Chicago.

I am a firm believer in teacher control and advice and was the author of a plan for the organization of an official teachers' council in the city of Cincinnati, which the teachers four or five years ago rejected. In this plan I was entirely willing to give representation to kindergarten, elementary-school, high-school, and administrative groups on the relative basis of their numerical importance. I am not unwilling to allow kindergarten workers a share in the consideration of issues affecting elementary-school, high-school, and administrative groups, if by such a policy we can bring all the workers of the system into a feeling of unity and common purpose.

In general I would say that the practical considerations suggested by the papers read should find every motive and it should be an impelling motive in the idealism expressed in the paper of Dr. Thayer. Its application to the administrative detail of a large city high school is a problem of fundamental importance and in most instances extreme difficulties to its solution. All of us, however, administrators, principals, teachers and pupils alike, should give our assistance.

OHIO HIGH-SCHOOL ATHLETICS

J. W. Wilce
Ohio State University

I deem it a privilege to be invited to speak to your association on a subject of such increasing interest as that of high-school athletics in Ohio.

I take it that all of us have a common interest and aim—the best, soundest education, improvement and development of the youth of Ohio. Our conceptions of methods of gaining this end may vary, but I do not feel that the difference is great. We in college work observe your problems from the outside. We work with the end results of the high-school training. We have certain standards in the conduct of intercollegiate sport which are, in the main, similar to those which are appropriate for the high school.

From this standpoint we, in college work, feel that the high-school athletic situation, along with the college situation, has made tremendous strides forward in recent years, especially since the war. Competitive athletics are becoming more important, challenging public interest, and, therefore, are increasingly influential many believe in a constructive educational way. The passage of the recent state law requiring physical education in all schools will illustrate the increasing acceptance by the people of the state of the real need of the physical as one means to an end in education.

Most of the present questions as to the value of athletics arise from the presence of abuses in the field. A questionnaire was recently sent out by the Ohio State Department of Physical Education in an attempt to get the facts concerning physical education and interscholastic athletics in Ohio schools. The following is the rather incomplete results of the questionnaire. Approximately 190 were sent out. Practically a fifty-percent return was made. Question 12 was, "Kindly state without using names, any abuses of the rules of the Ohio Interscholastic Association that have come under your observation during the last few years."

Out of 87 answers, 24 answered question 12. Representative replies to some of the questions follow:

A. Age-Limit Violations, (10 answers). "Several instances of players being over-age, mostly happening in the larger schools of the northern part of the state."
B. Eligibility Violations, (10 answers). "Boys on several teams in the country are too old and have been in school more than 8 semesters."
C. Independent playing—professionalism, (6 answers). "The amateur rule is applied rather carelessly at times."
D. Salaries of Coaches, (2 answers). "The coaches of high schools are receiving part pay from the high-school athletic association. This is a violation of the O. I. A."
E. Poor coaching ethics—"Anything to win" brand, (1 answer). "X of X and Y of Y are two of the worst. They are, to be very conservative, poor types of coaches; 'anything to win' brand."
F. Giving prizes of intrinsic value as reward, (1 answer). "Giving of prizes as sweaters and blankets."
G. Officials, (1 answer). "The Interscholastic Association should be better organized in respect to officials and scheduling."
H. Tournament, (1 answer). "Allowing Class 'A' finals to be held in the southwest district basketball tournament at Dayton when already two teams had been selected."
I. Miscellaneous, (1 answer). "Violation of Rule 15, Rule 3, Rule 4, Sec. B, D.

We take it that some of these rule violations are conditions arising from the usual causes, among which might be listed: (1) intense desire to win; (2) lack of objective for athletics; (3) athletics for advertising primarily instead of education; and (4) refusal to fully accept athletics and control them to best ends.

These thoughts lead us to a consideration of the possible theoretical objectives of athletics which might be used as a guide for practical action.

Possible Objectives for High-School Athletics

The Western Conference directors of physical education recently stated through their agent, Major Griffith, that in their minds the primary objectives of intercollegiate athletics are, first, hygienic and second, educational. The 50 percent defectives under the draft support the first. The second objective, the edu-

cational, includes development of loyalty, courage, unselfishness, persistency, concentration, cooperation, fair play, poise, self-control, and respect for the rules of the game.

Recently it was my privilege to read a paper to the American Physical Education Association on "Athletic Objectives." The high spots of this particular paper have more recently been included in a brief statement:

THE OBJECTIVES OF INTERSCHOLASTIC ATHLETICS IN THE LIGHT OF INTERCOLLEGIATE EXPERIENCE

1. To round out the content and appeal of education. We see much in print concerning the danger and abuses of intercollegiate and interscholastic athletics.
2. To serve as the high point of the pyramid of broadly conceived universal physical education in respect to specialization, skill, intensity, enthusiasm, and punch.
3. To stimulate and encourage the intramural sport form of physical education for all in the pyramid.
4. To give educational expression to desirable national characteristics and to encourage in the more orthodox educational system elements of physical and moral vigor, hardihood, sturdiness, vitality, fighting impulse and whole-souled, wholehearted, clean effort, to any given end.
5. To carry to alumni and the general public the educational viewpoint and stimulus and to bring back to the institution the practical "out-in-the-world" viewpoint to the advantage of each extreme. Athletics may serve as one sound contact point between the academic and alumni high school.
6. To conserve physical welfare and development, social and moral advantage.
7. To stimulate interest of participants and supporters in increased intellectual life and refinement through the field of greatest appeal.
8. To teach and illustrate sportsmanship, principle in action, amateur spirit, and numerous commendable human traits included in the educational and moral percept. This might include self-denial, appropriate submergence of self for team, self-control, alertness.
9. To develop those wonderful things known as morale and spirit in individuals, groups, institutions, or sections, to given progressive educational ends.

The athlete usually fights for the privilege of wearing school colors on the playing field because they love the game and consider that to represent "our school" a glory to be won. Times have changed, they tell me. Perhaps. If this is the case the

student boy of today is missing one of the greatest things in life, hot-headed belief in an ideal and the joy of fighting for it. This may be too idealistic for present-day materialism.

Reactions to present Ohio high-school athletic situation:

1. From all outside evidence the Ohio high-school athletic association has made splendid forward strides in uniformity of rules interpretation, in administration, and in sports, conduct and organization.

2. An employed secretary who acts subject to review by board of actual school administrators is the modern trend for best results.

3. Respect for rules necessary to harmony. Objections to rules and rulings are usually based on individual application instead of broad fully accepted principle. Bona fide objections may be based on different interpretations of same rule.

4. Basketball tournaments are well run. Urge willingness on part of members to allow lowest number of teams to compete in finals so that one game a day only will be required. Always judge by this standard, "Would I do this if it were my boy?"

5. As long as high-school principals will continue to employ men for coaches who have no training other than their intercollegiate playing experience or purely athletic coaching course experience, I believe the best results will not be obtained.

6. The broader viewpoint of athletics should be accepted and sold to all.

7. Among others, the speaker feels that the rule, limiting the award to articles less than one dollar intrinsic value, is extreme.

8. Athletically educated student bodies and alumni groups.

9. I believe the preliminary football training camps, long since abolished in the Western Conference, are an overemphasis in interscholasitc athletics.

10. I believe in playing to win thoroughly and cleanly. We all need to become better losers. This is a subject in itself, but the majority of complaints about the rules which control in an association come after defeat.

I wish to call your attention to the following poem, "The Prayer of the Sportsman," which, if made a part of the educa-

tional life of the state, would make for much greater eventual good for a much greater number.

PRAYER OF A SPORTSMAN

Dear Lord, in the battle that goes through life
I ask but a field that is fair,
A chance that is equal with all in the strife
A courage to strive and dare;
And if I should win, let it be by the code
With my faith and my honor held high;
And if I should lose, let me stand by the road
And cheer as the winners go by!

And Lord, may my shouts be ungrudging and clear,
A tribute that comes from the heart,
And let me not cherish a snarl or a sneer
Or play any sniveling part;
Let me say: "There they ride on whom laurel's bestowed
Since they played the game better than I,"
Let me stand with a smile by the side of the road
And cheer as the winners go by!

So grant me to conquer, if conquer I can
By proving my worth in the fray:
But teach me to lose like a Regular Man
And not like a craven, I pray.
Let me take off my hat to the warriors who strode
To victory splendid and high,
Yea, teach me to stand by the side of the road,
And cheer as the winners go by!

—Berton Braley.

HOME ECONOMICS

MAUDE GREGORY ADAMS, Ohio State University, Presiding

TRAINING CHILDREN IN BUDGET MAKING

GRACE G. WALKER
Ohio State University

The American home has undergone many changes in the last twenty-five or thirty years and the work of women in the home has changed accordingly. Today it is a recognized fact that training is required for efficient home-making and many schools and colleges have introduced courses that have a bearing in the home and its activities. The home-maker must be trained for the moral, the intellectual, the economic, and the spiritual side of home-making. We have long realized people needed training for earning, but we now begin to recognize the need of training for spending. Girls need training for spending especially in view of the fact that 85 percent of family income is spent by women. Most housewives sooner or later learn to cook, but few have any notion how to apportion their income, how to determine relative values, or how to secure the greatest amount of health, happiness, and clean wholesome pleasure for the entire family. In many cases the man holds the purse-strings and grudgingly doles out irregular sums of money to his wife for the living expenses which are necessary.

Often the man who is promptness itself in paying off on Saturday night his workmen in his business refuses his daughter an allowance for her clothing, because he is trying to practice thrift and is doing it in an unwise manner and without cooperation. Many good right-minded and generous men feel that the only way to run their households without extravagance is to dole out money in irregular sums.

In order that the family life be a happy and self-respecting one, it is necessary to have mutual confidence and an understanding of money matters. The wife who does not know the income and the outgo and can only buy things on a charge account, soon

finds out which account is paid most readily, as perhaps the food bill, and seeing no advantage in economy is not likely to practice it. She has no chance to develop or plan for an all around wise distribution of the income, no incentive for spending wisely and for saving. Frankness in money matters should be a point of honor in the family and where it is you will find a definite aim which is being realized.

At the first of each month something should be saved, the debt, if there be one, should be paid systematically and the rest of the income should be divided for food, shelter, clothing, operating expenses, and the children's allowance, in such proportions as will afford maximum family welfare and build the best citizens.

The man as a money-earner should look on his wife as a financial partner just as he does his business partner with whom he shares knowledge and power as to the income and outgo. Men generally believe that women will not spend the income wisely and in most cases girls are not trained by their parents for spending before marriage. We should help our daughters and the daughters of other people to get this training. The man does not have the time to train his wife and in many cases he does not feel it necessary or even want her to know the income or the indebtedness, but if wives were given the chance they would be willing and glad to cooperate to help pay off the indebtedness and to increase the income by choosing more wisely. The partnership method affords an education for each member of the family, for family life is a great training ground where the children should be trained to manage their own incomes and their own homes in the future.

In the school of life few things equal the disciplinary value of money spending, if the amount is small enough so that wise choice is necessary, and if the results of the expenditures are reviewed and compared. This development is denied those children who are provided by the decisions of their parents. It is wrong for parents to make all the decisions for the children and to do all the buying, and yet many do because they feel the income allows too slight a margin for mistakes and children lack judgment.

Parents should realize that girls and boys, too, need to be

trained for spending as well as for earning. The family is a co-operative group and each receives the share to which he is entitled by his needs. The family income in money, in time, and in labor, belongs to the family as a whole and should be divided by them to the best advantage of the group and of each individual in it. Children should share in the work in the home as well as the income and should *not* be paid for little tasks they perform; this is both bad ethics and bad education. A child should be given an allowance of only a few pennies a week at four or five years. As soon as the child is old enough, he should be provided with a book and be required to keep an account of his allowance. From time to time mother, father, or teacher should call for the account book and it should be ready. The child should not be criticised for his spending, but should be praised when he has made a wise choice. The money should be for definite things, but never for amusements or candy or movies only. The child should save a definite amount each week for some future want and the savings should be put in the bank. After he has saved a part then he must be taught to give something to others. As the child's responsibilities increase the allowance should be increased until at the age of twelve or thirteen years it should be sufficient to cover the cost of clothing in most cases.

Will the twelve-year-old child be able to spend wisely for clothing? No, nor is the bride that has had no training—in fact the women of America are said to be only 30 percent efficient in their spending and most any child who has had an allowance from six years of age and that allowance has been made large enough to cover clothing at twelve years, will be 50 percent efficient at the age of fifteen or sixteen years, and with the help of wise parents perhaps nearer 80 percent efficient. When the parents have given a sufficient allowance, being assured of the child's understanding of what it is to cover, they must not buy for the child the things he should have bought but failed to.

Marshall Field says, "If you want to succeed, save." This is true, not because of the value of money which the young person who saves accumulates, but because of the infinitely greater value of the system and organization which the practice of saving intro-

duces into his life. This result of the habit is not generally or properly appreciated. It is almost the greatest element in success.

An allowance, if large enough and not too large, develops unselfishness, generosity, independence, and self-reliance. If children are given an allowance and guided in their spending by wise fathers and mothers it would mean better education, fewer unsatisfied wants, a higher standard of living, better citizens, and happier homes. Many parents feel they cannot afford to give their children an allowance, but if they could but realize what a factor it is in building character, how much satisfaction, education, and training a child gets out of an allowance, how much more efficiently the family wants are cared for, how much farther money goes, and how much easier it is to save then every child would have an allowance.

The cooperation of the home, the bank and the school could do a great deal to prepare children for earning, for saving, and for spending.

INDUSTRIAL AND VOCATIONAL EDUCATION

E. L. Heusch, State Department of Education, Columbus, Presiding

PART-TIME EDUCATION AND THE PUBLIC SCHOOLS

R. O. Small
Director of Division of Vocational Education, Boston

Why does man labor? Back comes the traditional answer of the ages: "In the sweat of thy face shalt thou eat bread." Man labors in order that he may live. True: but not the whole truth. Men must labor if men are to survive. But all men who labor do not consciously do so merely that they may survive. The world's work is done more because men in large numbers have acquired work habits; love their craft. These habits were originally acquired when the alternatives were work or starve. Down through the past ages these work habits have persisted as the alternatives have become increasingly less apparent. Down through the future ages these work habits must continue to persist or the alternatives will again be dominantly in evidence.

"Machine industry has been possible for a century because of an accumulated fund, a working capital of work habits which could be depended upon . . . . This love of work has survived the machine—it has had enough momentum to remain alive for a century in spite of the fact that a sordid unimaginative industry is burning it up like flax." How long can we survive this process? It is our business as educators to think straight upon this point.

Traditions weigh heavily in the educational scales. Consciously or unconsciously, from the time of the Grecian philosophers educational reasoning has run thus: Manual work is debasing and slavish. Intellectual pursuits are ennobling. "Liberal" education is for the free man; labor is for the slave. Therefore, only the notably inferior classes should be educated for manual work; the remainder should be given purely intellectual training.

The local embarrassment occasioned us in Massachusetts by

the name "Industrial School" is present-day evidence of the effect of this reasoning. For years in our Commonwealth that name has been associated with correctional and welfare institutions. Nearly every week I note in the press or on the platform, or in personal conversation, the association of this "correctional" or "welfare" idea with the industrial education afforded in our established vocational schools.

A Predicament

Many of our youth pursue the academic courses of the traditional school and leaving school undertake to engage in manual work; work for which neither their education nor their experience has in any way prepared them. This is an unnecessary predicament; and comes from our exclusive and continued use of a leisure-class ideal of education as the basis for a democratic school system.

Originally all organized education was frankly planned for and pursued by the leisure class; a class relatively few in number for whom the others worked. At the beginning and for a long time thereafter, education planned upon this basis did effectively prepare those who pursued it for their future occupations; the enjoyment of their leisure time. With them a livelihood and enjoyment of life were only remotely related to a chance to labor and to secure effective preparation therefor. With the vast majority of our youth and in the occupations they seek to enter today a livelihood and enjoyment of life are inextricably bound together.

In theory most of us have discarded this leisure-class ideal as a proper basis for our present-day educational programs. But we have gone only a short distance in the establishment of an effective practice upon any other basis. We talk of teaching children to live. We have gone far in our establishment of courses which enhance appreciation of the fine things and fine opportunities in life. My discourse is in no way intended to discredit efforts in this direction. Let us hold on to and improve upon them. But let us also go in another direction and in con-

junction with the most adequate teaching of children how to live, let us not fail to teach them how to make a living. With all their getting of the first they need the latter. Usable value in knowing "how to live" has always been incidental to making a living or being supplied with it by the enterprise of others. All we boast of as educational comes directly or indirectly from labor. It is labor that creates the material resources upon which is elevated the comfort level necessary for the cultural educational advancement of individuals or groups.

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay:"

If our nation is to continue to prosper as a democracy, we must use a part of our accumulating wealth in support of educational programs planned to save our manhood and womanhood from decay—the decay of the will to work. Is it necessary that the will to work be broken rather than stimulated by our accepted educational programs for training our adolescent youth? When a proportionate part of those programs deals with training them and with matters related to training them for profitable employment then can we be more confident that by those programs we are also training them for profitable citizenship. As I see the case, debate of this statement is unprofitable except as we counsel together on how best to accomplish this purpose, but we should counsel as scientists and not as propagandists.

The Problem Stated

The attempt to afford our youth an opportunity for industrial education under public direction and through established public schools stands as a most important educational movement during the last twenty years. Its importance is found particularly in the attempt thus made to re-enlist the realities of life as organized educational factors. The attempt was made through the schools because industry itself through its workshops had failed to provide proper industrial training for its young workers.

The voice of the employee is heard in the report of the Com-

mittee of Fifteen on Industrial Education at the Convention of the American Federation of Labor in 1911:

> If American workmen are to maintain a high standard of efficiency, the boys and girls of the country must have an opportunity to acquire educated brains and hands such as may enable them to earn a living in a self-selected vocation and acquire an intelligent understanding of the duties of good citizenship.

While the voice of the employer in the report of the National Association of Manufacturers at their convention in 1911 stated:

> We favor the establishment in every community of continuation schools wherein the children of 14-18 years of age now in the industries shall be instructed in the science and art of their respective industries and in citizenship.

Our adolescent employed youth themselves do not have conventions nor do they issue reports in which to voice their opinions. Indeed, unfortunately they have few important opinions upon this matter. They rely upon us to equip them to meet their particular needs; to give them their educational preparation for active participation in the affairs of the world. We, having let them depart from our schools to enter employment, discuss most the needs of those who remain. Evidently we believe that by taking care of the few we shall provide for the many. Will we? This group that departs is a large one. In our State 60 percent of the youth fourteen to sixteen years of age and probably 80 percent of those fourteen to eighteen are out of school and at work. Why do they leave school to go to work in this number and so ill prepared?

All these questions interest us. There are many answers to them. I will not undertake to cover them. As to answering one of them. "Why do they leave?" I believe that poverty is a primary cause of children leaving school to go to work. Social workers say it is not a primary cause, that few leave because of economic necessity. I know that it is not poverty in a degree amounting to absolute need for the things essential to maintenance of physical life. It is, however, poverty of the resources necessary today to gratify a legitimate desire of many parents and

children—the desire to attain a new comfort level. This poverty forces children out of school and into industry.

The desire cannot be readily gratified if they remain in school. They are little skilled in abstract reasoning and do not consider well the possibility of deferred dividends. Thinking and living in the present tense they choose the relatively certain and immediate attainment of a new comfort level rather than the deferred possibility of greater attainment after long-time training at school. They choose that which satisfies their immediate desires and aims; they forego training for immediate earnings. And with those earnings they try to order their living even as you and I—from the Ford up or the automobile down whichever way you prefer to put it. Probably they make a wrong choice; but are they entirely to blame? How can we help them to choose more wisely? This then is our problem.

Given all the youth in a democracy, how can we today train them to become worthy citizens; efficient producers as well as intelligent consumers? It does not appear to have been solved through the agency of full-time school programs. The youth cannot or will not remain to pursue those programs.

Certain Established Agencies

In our discussion of the problem and quest for a solution it is helpful to consider briefly the different types of educational organizations resorted to in the last forty years to afford training for profitable employment in industrial pursuits.

1. From 1880-1905 manual training was resorted to. It has long since been given up as a system promising specific vocational results. It is accepted, however, as a system with great potential prevocational value.
2. In the decade 1905-15 full-time day trade schools—private and public—were particularly resorted to as the solution, and we shall continue to establish them.
   Such schools have and are performing a most valuable service for those pupils who will come to them and stay to take the training offered therein. I decry any tendency to disparage their worth because of the relatively small number of schools established, the restricted range of trades trained for, and the relatively few pupils reached. While they give special attention to those who can forego earning to stay for training, I

believe that they will eventually be turned to as the agency to help develop a new establishment of apprenticeship. An apprenticeship for a selected group of skilled trades.

3. Since 1870 and particularly during the last fifteen years many business concerns have created special corporation schools for training their own apprentices. Lately these schools have taken a decided trend toward training at the job itself.

   These corporation schools are excellent within their particular scope. They are not practicable for a small business. They rarely admit pupils under sixteen years of age, and they can admit only a favored few. Their policy necessarily is shaped by the employers: their primary purpose is profit for the corporation. But that which is profitable for the corporation is not always profitable to society.

   As potential citizens, our minors' needs are greater than can be satisfied by the business exigencies of any number of single plants. Corporation schools have a real place and they serve well in that place but they cannot reach and train all the children of all the people for worthy citizenship and profitable employment.

4. Evening schools for those already employed have been carried on for a long time. They find their chief strength in cities of over 50,000. The young students working by day are generally too tired to pursue evening instruction with profit. Evening schools alone will not solve the problem.

The Situation Defined

What is the situation of our youth today relative to prospective employment? In what employments are they engaged? Dr. Paul H. Douglas has portrayed this most vividly. Let us consider modern industry as a five-story building in which there are few or no inside stairways or elevators. Quite uniformly all means of access to the upper stories is on the outside of and precariously far removed from the structure. Let us consider that the unskilled workers find employment on the lowest floor, on the next floor are the semi-skilled, the skilled workers are on the third floor, the clerical and accounting forces are on the fourth floor, and the highly trained executives and staff of skilled engineers are found on the top floor.

Anyone may enter the ranks of the unskilled workers by walking in on the ground floor; no stairs are needed. Only he who can secure support, while he is outside learning may essay to reach the upper floors, to climb the outside staircases, or to ride up on the outside elevators. Quite uniformly there is little or

no access up through the industrial structure itself to the upper floors.

Can you conceive a less democratic scheme for recruiting our young workers to skilled industries? Each of the groups and grades of workers is recruited exclusively from a particular class; each class a little more advanced and financially better situated than the other. This is the identical organization which produced class stratification in Germany. It is producing class stratification here. It is an organizing of our human resources with dangerous disregard for equality of opportunity.

Some agency should have as its special function the equalizing of opportunity—the adjusting of our human resources to meet our human needs. It is in part the function which apprenticeship performed for those it reached in its early days.

Apprenticeship.—Apprenticeship is as old as civilization. It is basically a process of learning by doing. By it during the early personal contact stages, entrance was gained to all occupations including the professions. Its completion was marked on the one hand by the craftsman's masterpiece, on the other by the doctor's thesis.

Trades, crafts, and professions developed beyond the early personal-contact stage. It was thought that apprenticeship could be improved upon. General principles involved in the professions and trades were abstracted and instead of apprenticing the youth in doing, he was given instruction in these principles. A knowledge of the science involved was depended upon to supply that which the art of doing had given. But mere knowledge of the science did not supply mastery of the job, it could not supply it.

In industrial pursuits the real working content of the trade can be taught most effectively by, and in connection with, the practice of the trade itself. For the professions as well as the trades it is commonly recognized that purely abstract instruction gives inadequate preparation for mastering the vocation.

But mastery of the job was not the only function of the older apprenticeship. Apprenticeship was designed to function as a preparation for citizenship and life as well as for the practice of

a trade. It was established for the general good of society as well as to afford occupational training for the individual.

In Massachusetts by the colonial law of 1642 the colony attempted to exercise control over the master in his training of the apprentice until he was twenty-one, and in instances until he was twenty-four years of age. In this particular and in the complex life of today, with its dangers for adolescents, we free our youth from training seven to ten years earlier than they did in colonial days. The State must again assume control of this training and again direct the master to share in the responsibility.

Let us attach a glamour to this old-time apprenticeship. Too often it was little more than the transition step between servitude and freedom. No inclusive halo should be cast about the heads of those old masters. Here "chores" were often carried on under the guise of apprenticeship and the time of the indentured wards was expended upon ineffective labor. While this is so I must, however, point out one fact: within its limitations and for its period, apprenticeship functioned in the solution of a problem similar to the one which confronts us today by its functioning the young worker was trained. From these pages of industrial history we can learn valuable lessons in pedagogy.

The Decline of Apprenticeship Division of Labor.—Why did apprenticeship decline? The industrial revolution manifesting itself directly by greatly increased division of labor and the consequent multiplicity of different jobs was the cause of its decline. The division of labor and the splitting of trades into many jobs is the logical outgrowth of a machine era. This era destroyed apprenticeship trade training and also divested apprenticeship proper of its civic educational features. It is still destroying our fund of work habits and doing little to replenish it. The machine era adds children to industry, because of the value of their immediate labor and considers little or not at all their potential productive citizenship. The industrial organization based on this division of labor is today the factor which confronts and baffles anyone attempting to devise and administer any scheme for industrial education; especially schemes for the training of girls.

The Dissipation of Skill in the Machine Era.—Under the in-

dustrial organization of today with trades split into many jobs, all-round skilled workmen are not demanded in the proportions formerly found necessary. There is, therefore, a much decreased opportunity for a young worker to exercise general skill should he acquire it. Because of the multiplicity of jobs and the machine tools used on these jobs, the mastery of all the machines within any given trade by one individual becomes not only unnecessary but well nigh impossible.

In practically all highly developed machine operations relatively untrained workers are said to be as competent as trained workers. The experience of the Emergency Fleet Corporation shows how little time is required to master the main principles involved in these machine operations. The average length of training of all men for all the operations in the seventy-one yards of the corporation was nineteen days. The amount of skill needed by the worker varies from industry to industry; from plant to plant; from locality to locality. There is nothing approaching a standard requirement to train for. This is well illustrated in the automobile industry in Detroit. In the mass production output of the Ford plant practically all the work can be done by unskilled labor. In other automobile plants in the same city all the work is done by highly skilled workmen.

The Concentration of Skill in the Machine Era.—A large number of highly trained and competent engineers are needed in the drafting-room today; much of the skill once spread among the mass of workers is now concentrated here. There are instances of concerns which actually employ more individuals in their administrative and executive positions than workmen in their shops. Great skill is required in machine repairing. In order to possess the knowledge and skill necessary to repair one part of a machine the repairman must know all the parts. The repairman in a modern plant must possess more all-round skill than was ever required of the old producing craftsman.

The Patent Facts.—From the above these facts are patent: (1) It is wasteful and unnecessary to try to equip all our youth with trade education which they do not need and cannot utilize. (2) We must solve our problem of affording adequate training

to our young workers by meeting and not by ignoring the factors involved in modern large scale production by means of specialized labor. (3) We cannot look forward to a passing of the machine era; it, with its consequent organization of industry, is here to stay. (4) In view of these conclusions we must not jump to the opposite extreme and conclude that the modern worker needs no trade education. (5) The juvenile worker of today needs education more than ever before; but in nature it should be far different from that which the old apprentice boy required. It should be both a broader and a narrower education; broader in that it should include more training in industrial life, hygiene, and safety; narrower in that it should not include as large a proportion of training in specific trade processes. (6) Finally these youth cannot all forego earnings to acquire this education before they enter employment. If they could it would be impossible for any all-day school system to afford them all the varied and diversified industrial training they all need. Indeed were such a program of full time-work pedagogically possible, it would not be the most profitable program to undertake.

Re-establishment of Apprenticeship

Since universal apprenticeship in the skilled trades functioned effectively in its day, a revival of compulsory apprenticeship has been suggested as a solution to this problem of training our youth for employment. Why not do it through re-establishment of a comprehensive system of apprenticeship?

The State of Wisconsin has made a remarkable contribution in this direction. Wisconsin's recrudescence of apprenticeship shows unmistakable signs of growth. It is compulsory. The indenture agreements are filed with a State Board of Supervision. In the indenture a definite time for instruction is stated, regulation of hours and wages is provided for. Specification of the particular processes and the time for instruction therein are included in these indenture agreements. Supervision by public authorities who mediate differences is required by law. The actual functioning of the law appears to be limited to certain highly skilled

trades. In the nature of the case this must be so. It does not readily appear how it can apply to so-called trades which are in fact little more than an aggregation of occupations.

To the extent that the old apprenticeship in certain highly skilled trades failed because of faulty organization, re-establishment of indentured apprenticeship with such restrictions as are imposed by the Wisconsin law points the way. Such re-establishment does not offer hope, however, in the extent that the old apprenticeship failed either because of the advent of the machine era or because of certain business and social considerations. In the operation of any apprentice law these considerations have great weight. They are considerations which laws cannot automatically reach and control.

Apprentices are immediately unprofitable to the employers because good apprentices desire to learn as much as possible in a given time. The employers aim to produce as much and as cheaply as possible in that same time. When an employer has trained apprentices there is no guaranty that the corporation which trains them will enjoy their services. Since this is the only opportunity the corporation has to recoup on the expense thereby sustained, employers hesitate. They wait for their competitors to do the training. The common attitude of corporations is this: "Let Jones train them; then I will hire them."

Workmen really dislike apprenticeship systems. They are suspicious and jealous of the apprentices. They really withhold information and help through real or fancied danger of undermining their own jobs. Parents favor apprenticeship very little because of the juvenile character and long duration of the initial stages of employment and the immediate loss of full wages. The boys dislike apprenticeship because of the small initial wage, a desire for independence, and most of all because of their liking for clean-collar jobs rather than those in overalls. They actually refuse to remain on a dirty job which promises high wages and elect a clean position with no promise and a low wage.

Relatively few of our youth may profitably be trained specifically as apprentices in the whole of relatively few trades. It is probable that the great majority of our youth should be trained

as interchangeable parts in the industrial scheme—trained for elasticity of adjustment.

If it is to be effective the agency that undertakes this scheme of training must itself be an elastic one. It must be comprehensive in its scope and range. It must automatically reach all employed youth at the earliest stages of their employment; and it must be eternally engaged in training individuals to meet adjusted conditions.

The educational agency which in any way gives potential promise of being able to perform this varied service is the part-time school. Responsibility for apprenticeship can well form an integral part of the program of the part-time school. That school should function for all youth who leaves the full-time school to enter into employment, it should follow them from the full-time school into employment, evaluate their needs, capacities, and attainments, and then cooperate with industry in affording them effective training.

Part-time Schools

In recent years an active interest in state controlled and directed part-time education has had new expression. It has found expression not only in the re-establishment of compulsory apprenticeship but in the establishment of two types of part-time schools sometimes independent of the apprentice system and at others included with it. These two types of schools are:

Type: Cooperative—The typical cooperative school provides for its pupils alternation between theory and practice by giving school training and shop experience in equal periods of time to equal groups of pupils. Attendance upon the schools is voluntary. In this type of school both the shop work and the class work are supervised. The school finds employment for the boys in the cooperating industry. This employment is most often in large plants and dominant industries.

Type: Continuation—The typical continuation school assembles young workers 14, 16 or 18 years of age in school for a few hours each week. Four hours of school attendance is at present the requirement in Massachusetts. The boys or girls enrolled therein have left the traditional school and entered employment. Attendance at these schools is compulsory. The pupils are visited by the instructors at their employment but their shop work is not supervised or directed by them. The school work may or may not be correlated with the pupils' employment.

The Solution

Through these three expressions, apprenticeship, cooperative schools, and continuation schools, part-time schooling has given tangible evidence of the procedure we should adopt if we are to solve our problem—the problem of training all our youth for employment. In these and other types of part-time schools it is entirely possible for pupils unable to remain full time in school to continue their general education; to secure trade training for placement in industry; and to pursue courses dealing with the theory and practice of the occupations in which they are already engaged. It is possible for types of part-time schools to reach and help those employed in the smallest plants.

In them can be found an opportunity for industrial training dependent neither upon the pecuniary profitableness to the individual employer nor the ability of the pupil to entirely forego earnings—an opportunity for large numbers of the abler members of the lower economic classes to rise to the top in industry. Through them the youth may earn while learning, may have an equal opportunity to fit for and try for the better positions. Through them will be found those inside stairways for employed minors which lead to the upper floors of the industry—stairways which, because of economic necessity, are unavailable for them when supplied only by a full-time school. It is a program of educating our youth based upon sound democratic principles, a scheme which will go far toward preventing class stratification; a plan which will operate to build up rather than deplete our stock of work habits.

An organized effort for the uniting of the realities of life with our educational programs so that the abrupt break between school and employment may be abolished affords almost as convincing an argument for all forms of education and for all groups of our youth as for the type and the group to which I have thus far restricted the argument. The school, the college, and the university should function not only in training the individual members of its student body but in helping those trained to adjust themselves to

worthy employment. In the process of securing an education all the members of a democracy could profit by this type of service.

A part of the program of part-time education can concern itself admirably with vocational advisement. In the part-time school both the advisers and the "advisees" find themselves on a profitable apperceptive basis, from which those in one group may be directed into the occupations in which they can find the greatest efficiency and happiness; and those in the other group can help determine the positions for which our youth are best fitted and the positions best fitted for our youth.

Quantities of our youth annually leave our schools, our colleges, and our universities for employment. They are willing and anxious to work, sometimes highly trained. These healthy, husky, intelligent youth tramp from office to office begging for a chance. Did any of you ever do it?

It should be a minimum requirement of any rationally organized educational system that those leaving any unit of the system, able and willing to work, be helped to a chance to do so. Those who desire preliminary training on full-time for specific employment as an alternative to leaving school for employment should be given that training. Those who leave without training and later find its need should be given some measure of specific help either in preparation for or supplementary to that employment.

A Program

The most successful programs of part-time education will be those which supplement a prolonged and thorough preliminary training of the child. In order to give functional part-time training most effectively, the part-time school should deal with mature rather than immature youth. At some future date we should perhaps look forward to a uniform compulsory full-time school attendance requirement for most of our youth up to sixteen years of age. This requirement can be defended and the departure wisely taken only when the full-time schools are ready to undertake and are equipped to afford profitable full-time training to all

of the pupils retained therein. At present for our youth between fourteen and sixteen years of age who seek employment I believe in the four hours per week part-time school program. This should be increased at an early advisable time to a half-time compulsory school program for this group. The next step beyond that should be a four-hours-a-week compulsory program for employed youth sixteen to eighteen. All of these compulsory steps should be supplemented by voluntary part-time cooperative school and a publicly controlled apprenticeship system in certain highly skilled trades. And, of course, for the group that desires and can remain to pursue the courses, full-time schools of varied types should afford the opportunity.

Beyond this setting for our grammar and high-school stages, for those who desire to avail themselves of it, a part-time opportunity, parallel in essential content, if not in scope to their full-time programs, should be organized in colleges and schools for advanced study. The University of Cincinnati, Antioch College, the Institute of Technology, Northeastern College, and many other excxellent institutions have already commenced to plot the way. With this program in full operation we shall potentially be able to train all of our youth for possible employment whether industrial or otherwise and we can also train them then most effectively for profitable citizenship.

Business should be willing to join in this program for the education of our youth and their adjustment into participation in the world's work. Business concerns write off annually, large amounts for replacement of their machinery. Only with their "human resources" does business pursue a policy of using up rather than re-creating. Through cooperation with established school authorities in programs of part-time education business can profitably apply to their human resources the principle long in effect with their material resources.

Summary

In the main at the present time we find our youth divided between two groups: (1) a relatively small group, those in school

who study but do not work; possessed of much schooling but less education. They have hardly a chance to acquire the world's-work habits. (2) A relatively large group, those out of school who work but do not study; possessed of little schooling but with their education "in process." They are conserving for us our store of world's work habits. The members of a democracy must learn to work with their hands or their heads; they should also be educated. For most of our youth education and the work-habit can be best acquired by combining study and work. By means of a full-time scheme of education we may hope to adequately reach and train only a fraction of our youth. By means of a comprehensive and adequate scheme of part-time education supplementary to our full-time scheme we may hope to reach and train all the youth in a democracy to become worthy citizens; efficient producers as well as intelligent consumers. Mr. Employer, this is as much your responsibility as it is the schoolmaster's. The call to service is written solemnly for you both.

WHAT INDUSTRY EXPECTS OF GRADUATES OF INDUSTRIAL COURSES

R. H. Sweetser
American Rolling Mill Company, Columbus

In talking about what industry expects of graduates of industrial courses, I can best describe the requirements by telling you how two groups of young graduates were selected, trained, and graded by The American Rolling Mill Company within this past year.

It became necessary to establish a Coal Inspection Department for the purpose of improving the quality of coal shipped from the different coal mines in Kentucky and West Virginia owned and operated by the American Rolling Mill Company, most of the coal being used at the several steel plants owned and operated by the same company.

The work of organizing and developing this Coal Inspection Department was an entirely new thing, and when the Employ-

ment Department asked what sort of men were required, they were told that men with some technical training as a foundation would be best suited for this sort of work. They should be men who were not afraid of getting dirty, men able to stand exposure to the weather, and able to make observations and quick estimations, firm in their conclusions, and able to stand criticisms and objections from the foreman and from the miners at the different coal mines. They were told that the young men should have preferably a high-school education, and if possible a knowledge of physics and chemistry.

The training of these men to inspect coal was undertaken by the Betterment Department of the American Rolling Mill Company at Middletown, Ohio. Three separate groups with a total of nine men started the course and two groups with a total of seven men completed it. All but two of the nine men starting had graduated from high school; four had graduated from college or a state normal school, and three had attended college or state normal school for two years or more. They were all high-grade men. Most of them had had some training in chemistry and physics. One man had had practical experience in coal mining, and another had had experience in laboratory work at iron and steel plants.

These men were graded in the following qualifications: industry, versatility, skill, mobility, willingness, energy, interest, leadership, observation, knowledge, and judgment. Out of the nine men who were started in this intensive instruction course of three to four weeks, only two failed to finish the course. At the end of one week it was found that two of the men were not suitable for the work of coal inspectors and the reasons given were: It was not their intention to remain in the fuel industry, and consequently, their interests and natural inclinations did not permit them to enter into this work with the proper enthusiasm.

In the training, and in the work of these young men, character and willingness to carry out instructions have been the two predominating factors and requirements. If a young man is not honest, and is not willing to work hard and to earn promotion he is not wanted in industry. The four main characteristics looked

for in applicants for positions in industrial plants are: ability, reliability, endurance, and adaptability.

Modern industry is now becoming so complicated that each one plays a part necessary for the success of the whole operation, and if that part is well carried out it helps everyone else in the organization. If it is not well carried out it holds back the whole enterprise, and in many cases is a factor in preventing the success of that enterprise.

To sum up, modern industrial management expects graduates of industrial courses to be trained to work without being afraid of getting dirty, and expects that the young men shall be willing to start at the bottom with the idea of promotion on merit; expects the young men to be able to cheerfully obey instructions, even to the minutest detail; expects them to be quick to make observations, and to be able to make a correct record of their observations, and to be in all particulars truthful as to the information that they have gathered. Industry expects these young men to be able to work harmoniously with the other men with whom they come in contact, expects them to be courteous to those with whom they are associated, and expects them to be capable of promotion. Under the conditions that have existed in this country since the establishment of the Government of the United States, the opportunities and conditions have been such that there seems to be no limit to the progress that can be made by a young man in industry. It depends upon his willingness, earnestness, and endurance. There are, however, at present, indications of a desire and an attempt on the part of some people to make artificial conditions to bring about a so-called success by an attempt to do away with the fundamental laws of economics.

Many of the troubles in industry can be traced to false ideas and false doctrines of economics. It seems to me to be desirable for a course of industrial and vocational education, or in technical engineering, to give instructions to young men in the fundamentals of economics. The young men should be taught that productivity and prevention of waste—waste of effort, of time, or of materials—bring about results that are advantageous both to the man who does the work, and to the man who furnishes the cap-

ital. There have been too many young men graduating from the industrial and technical schools who have had false notions regarding the—I might say—*nobility* of real hard work. They have had false notions regarding the men who have not had the same educational advantages that they have enjoyed. They have no notion at all of the meaning of productivity. They cannot even express their own ideas and thoughts, and in many cases, they really have no thoughts of their own. They have had too much of "jazz" notions, and have overlooked entirely the fundamentals of hard honest work.

Industrial management expects of young men, that they will continue to study after they have started to work. Every industry is continually confronted with new problems which must be worked out by the men in the organization. These problems cannot be solved by any previous knowledge, but they must be worked out by knowledge and experience in fundamentals. The graduates of industrial courses should be taught to study, to learn by experience, and to profit by the experience of others.

It is very necessary that industrial and technical courses should give instructions in English composition, with the idea of having men able to express themselves, and to make reports that are readable, clear, with statements that have only one meaning.

JUNIOR HIGH-SCHOOL PRINCIPALS

T. M. Muir, Principal, Lafayette Bloom Junior High School, Cincinnati, Presiding

TAKING STOCK OF THE JUNIOR HIGH SCHOOL

V. T. Thayer
Ethical Culture High School, New York[1]

If we were to estimate accurately the importance of the junior high school we should view it in a world setting. While it is an American institution, a product of American educational philosophy and practice, it takes on wider significance because of world movements in the direction of democratic education. At precisely the time when there is a demand in many foreign countries for the education of all the people in common schools throughout both the elementary- and secondary-school periods, the junior high school in America comes forward with a unique plan for accomplishing this purpose.

Universal and common education requires a modification of traditional education because it involves more than "book knowledge." It means a well-rounded education in a most real sense. It means the acquisition of common information, the inculcation of proper emotional attitudes and tendencies, and the development of ideals and habits out of actual participation in group activities. It means also a wide variety of industrial and artistic experiences both for the purpose of exploration and discovery of common aptitudes and capacities and because "Life must be lived in order to be known."

These ends the junior high school seems designed to realize. Moreover, in view of the general tendency to raise the age of compulsory school attendance, it becomes the culminating point in a process of general education. It seeks both to raise the level of general intelligence and to prepare wisely for later differentiation along vocational lines.

[1]Now of the Department of Principles and Practice, Ohio State University.

In the light of these general aims and this promise of world-wide influence, let us take stock of the junior high school. First, how widespread is it? And secondly, what is its character as revealed by its organization and its program of studies?

The statistics of the spread of the junior high school reveal a phenomenal development within the past few years. On the basis of reports made to the Bureau of Education we are entitled to infer that about one-third of the cities in the United States have established junior high schools. All this has come about within a period of no more than twenty years. This transformation is the more spectacular when we further observe that seventy cities have made the change within the past two years.

A closer scrutiny of the situation, however, does not sustain uncritical optimism. When one examines the arguments advanced by superintendents and principals for introducing junior high schools, he finds such reasons predominating as, "to relieve congestion," "to utilize old high-school buildings," "to provide better for grades VII, VIII, and IX." The suspicion arises that only too frequently the real purpose is "practical" and is not for the purpose of effecting a genuine reorganization of education in the years of adolescence.

These doubts are somewhat confirmed by reports such as that of Professor Davis on the junior high schools in the North Central Association territory. He writes that,

> In numerous instances the modifications of the old type grammar schools are so meager and half-hearted, so purposeless and feeble, that only by the exercise of much charity of spirit and liberality of judgment can they be regarded as having caught even a glimpse of the new movement.

And a bulletin of the North Central Association states that "altogether too many school systems are deceiving themselves with names, are mistaking the husk for the kernel."

But the worthwhileness of an institution is not measured solely by its numerical growth. When we consider all the reforms the junior high school came forth to champion, we should not be surprised if it failed to meet our expectations. The junior high school has aimed to offset practically every sin charged against

secondary education since the famous Report of the Committee of Ten in 1893.

Consider the prescription it attempts to fill: To eliminate much of the traditional materials of the old grammar grades and to substitute material more nearly of secondary-school calibre; to introduce varied curricula which will provide for indifferent needs, ease the transition from the grades to the high school, reduce elimination, and give worth-while experiences to all pupils irrespective of the length of their educational careers; to guide pupils and provide situations and subject matter which by virtue of their varied and practical character, will lead to exploration and discovery of interests, abilities, and capacities; to plan and direct out of classroom activities which will develop the social instincts and transform natural impulses and crudities into well-defined habits and practices of social cooperation.

We should be surprised in the light of this situation, if the junior high-school movement revealed confusion in aims and some dissipation of energy. There is good ground for believing, however, that this is a temporary stage. A close inspection of the present trends in the program of studies reveals a remarkable development of well-coordinated objectives and policies. Valuable textbooks are now available and experimental courses are bringing forth fruitful results. This becomes evident from such recent publications as O. A. Davis' *Junior High-School Education,* the *Specimen Junior High-School Programs,* issued by the Bureau of Education, the excellent *Circular* of the Pennsylvania Department of Public Instruction, *Ohio High-School Standards,* and the committee reports of various state, sectional, and national organizations.

What trends do these reveal? In brief, they reveal a clear conception of the junior high school as a *transition school,* covering generally the seventh, eighth, and ninth school years. The seventh grade is conceived now as the year of adjustment to "a new school organization and to a new type of school administration." The trend is away from electiveness in this year and the changes are being restricted to those involved in departmental teaching and modified courses of study.

The emphasis of the eighth grade is placed upon ***exploration.*** It is the time for general courses which emphasize richness and breadth of experience rather than narrowness and thoroughness of training. It is the period for courses in general science, general mathematics, general history, social science, general shop courses, and courses in the fine arts. Moreover, it is also the period for definite recognition and encouragement by the school of student activities and student participation in school government.

In the last half-year of the eighth grade and the early part of the ninth grade *a provisional choice of electives* is advised by the Pennsylvania *Circular* and the National Council of Education. It is urged that

> During this period facility of cross-over between electives should be promoted by every administrative device possible, to the end of guaranteeing that evidence of unfitness for an elective will be followed by effecting a change of electives.

It is also the supreme concern of this year that the school be interesting in a genuine sense, so that the child will acquire sufficient momentum in the courses elected to carry him well along the educational highway.

These seem to be the broad lines of agreement in the present conception of the junior high school. It goes without saying that the school will take much of its character from the needs of the community it serves. Nevertheless, the major function of the junior high school may very well be to inculcate our national aims and ideals.

Two or three further points require mention in connection with the purpose of the junior high school.

First, its student body is not a selected group in the sense that secondary-school pupils have always been selected. It is recognized that while the junior high school sends pupils on into the differentiated curricula of the senior high school it also must provide for all pupils, and that in particular the over-aged pupils and the "drop-outs" should not be forgotten. Junior high schools are providing special courses for these pupils which will "offer to these over-aged and backward groups occupational training sufficient in extent to insure vocational placement."

Secondly, there is fairly general agreement that the junior

high-school age is the favorable period for the socialized recitation and supervised study, whereas independent study and the formal recitation more properly belong to the senior high school.

And finally, the curriculum. The so-called "constant-with-variable" program seems most likely of general adoption. The major constants are four: English, social studies, science, and mathematics. The committee of the National Council of Education recommends that these constants be supplemented by required unprepared courses in the practical and the fine arts and in school health, while definite time allotments be provided for school activities and for the guidance of individuals. The electives lead to later differentiation and are secured by progressively lessening the time allotments to the constants.

There are the plans whereby the junior high school hopes to raise the general level of intelligence and to introduce a well-rounded secondary education. Hitherto the great source of inspiration and guidance in the direction of reconstruction in education has come from the kindergarten and the primary grades. There is every reason to believe, however, that the junior high school is a new germinating ground for progress. It is fortunately situated for this purpose. It is relatively free from dictation from above and below, and it can write its program of studies in the light of the best contributions of modern pedagogy. May it capitalize these opportunities in the interests of a democratic society!

ABILITY GROUPING FROM THE ADMINSTRATOR'S VIEWPOINT

C. R. Wise
Principal, Empire Junior High School, Cleveland

The junior high school has undertaken to put into execution a large number of desirable practices. It has been the favorite trying-out ground for everything that is new in pedagogical practice. It was founded with the basic idea that individual differ-

ences should be recognized and developed—that it would tend to allow every child the opportunity to find his own ability and help him to progress at a rate best suited his individuality. Accordingly we have seized upon every new device which seems to offer a further opportunity to meet the individual needs of the pupils, and so one by one we have added plans and ideas all of which we have tried to work out in the form of a school program.

Among other things we have attempted to build a program so that the following things might be accomplished: promotion by subjects, introduction of a variety of elective subjects, shortened programs for those who need to work part-time or whose health is poor, and finally the grouping of all children into groups on the basis of their ability as shown by intelligence tests.

It is to be noted that these things were added one at a time, little thought being given to the mechanics of program-building which they involved. The proponent of any new plan for organization is primarily concerned with its adoption. The arranging of the plan is left to the principals of the schools to work out as best they may. In fact, the usual procedure is to adopt the suggested plan officially by the board or the superintendent, and then take it for granted that the principal can arrange his program for the next semester, so as to incorporate this new feature.

Probably every principal knows that there has been little if any help given him in this job of program-making. He does the best he can to get the desired results and many times is successful in making it appear that he has done so, when in his own mind he knows that he has only partially succeeded. It is comparatively a simple matter to give an intelligence test and then say that we will divide our pupils on the basis of that test, placing the highest third of the pupils in the superior group, the next third in the intermediate group, and the lowest third in the slow group. To the lay mind this looks very simple of accomplishment. In fact there are many people who are closely connected with schools to whom the problem seems simple. Teachers, superintendents, and supervisors are frequently unable to see the problem involved in this apparently simple task. I desire to point out a few of the difficulties which the program-maker has to meet and solve, and

to enter a plea for a more careful study of this phase of the question with a view to affording some instruction to those principals who are hampered by these difficulties.

In the first place grouping pupils by their ability is a very desirable thing to do. There are few valid arguments against it per se. The biggest argument against it is that it is almost impossible to accomplish. If it were easy to do practically all of the opposition would vanish at once. But when a principal who is responsible for putting these things into practice is entirely unable to see how he is going to work it out in a program, he is very prone to find all sorts of plausible educational reasons why it ought not to be done.

Several years' experience as principal of a fairly large junior high school has shown no less than seven real obstacles which bar the way to successful ability grouping. Strange to say most of these obstacles are other things which have been introduced from time to time to assist in this same aim of meeting individual differences:

1. The numbers of pupils in sections is dictated by the size of the classrooms and shops. The number of girls and of boys in a section must be such that when the shop and domestic-science period arrives there will be enough boys to form a boys' class and enough girls to form a girls' class and no more.
2. The elective subjects must be available for pupils in all groups. It must, therefore, be possible for a pupil to stay with his own group in all other subjects but at the same time be free to attend the class in his elective subject whenever it comes. There is often only one class in each elective subject in any one grade.
3. Promotion by subjects demands that any pupil shall be promoted in any subject in which he passes and repeat only those in which he fails. When we attempt to reconcile this with ability grouping, it means that any pupil in any grade may be repeating any subject, including the elective, and at the same time take all of his subjects, regular and irregular alike, with a section which fits his ability.
4. Summer schools, permitting pupils to take one or two subjects in advance in order to get ahead and finish a year or so earlier than they regularly would do, tend to accentuate this problem.
5. Many pupils must have short school hours either because they must work part time or because their doctor certifies that their health demands a forenoon program. The work-permit department frequently is convinced that pupils should be favored by a forenoon program. Building a program for

such pupils is almost always impossible without placing them out of their group in one or more subjects.

6. The junior high-school course of study is usually an awkward one to arrange in programs. Shop periods are double periods and come on two or three days of the week only, there are other one- and two-hour subjects which make program juggling a difficult thing to do and still keep any semblance of grouping.
7. Finally, there is lacking anything like a general standard of grouping even in different schools of the same city. Pupils transferring from one school to another after classes are made up, must be fitted in wherever there is room for them. Localities differ so that a superior pupil in one school may not be superior at all in the school in another locality.

These are not all of the problems which the program-maker must overcome in his attempt to put into practice many things all of which are undoubtedly good to do. It is small wonder that he arrays himself against the introduction of any more complications for his job. What we need to do is to institute some research on the question of program-making, and, before asking principals to introduce further innovations, we must first harmonize them with the rest of the program and show how it may be done to the best advantage.

SOCIAL PROBLEMS INVOLVED IN THE JUNIOR HIGH SCHOOL

W. W. Wager
Principal, Theodore Roosevelt School, Columbus

When the new unit called the junior high school was first introduced into our national educational system, the magnitude of the mutation was not recognized. This peculiar period of biological and psychological change had long been known to exist, but few educators understood much about it. The junior high-school idea appealed to boards of education for financial reasons, since the cost of schooling adolescents was less when they were congregated in larger groups. Superintendents adopted the plan largely for the purpose of "bridging the gap" that had long existed between the elementary and high schools. Both of these

ideas and the idea of enriching the course of study were supposed to have corrective effect upon the training of the youth of this important period. The segregating of the pupils of the seventh, eighth, and ninth grades into one organization, where the problems peculiar to this age may be studied, is meeting the approval of those who believe in a psychological method of dealing with pedagogical matters. Immediately the problem of texts, curricula, teachers, equipment, housing, administration, and extra-curricular activities demanded solving. This new educational project soon appeared to be more than a scheme for "bridging the gap"; this reorganization program was given the most important function of our public-school system, that of rousing right social impulses at the crucial moment. Professor Briggs says, "In its essence the junior high school is a device of democracy whereby nurture may cooperate with nature to secure the best results possible for each individual adolescent as well as for society at large." For this reason "the junior high-school movement is the most widespread and important educational development that this country has yet experienced."

Adolescence is the time when the elements of personality are being formed, the age when the higher and more human traits are developed. The child at this time comes into his social heritage and it is a matter of moment whether he is trained to reject or accept this heritage. Failure to accept this social inheritance and consequently to make the proper adjustments to one's surroundings means social inefficiency.

An old adage says that "Life forever keeps the keynote first struck," therefore it is the duty of the junior high school to establish moral and social standards for our time and to influence public opinion as to the necessity of positive moral education. The function of guidance is an obligation which the junior high school must necessarily assume. We should not only be concerned with the vocational, instructional, disciplinary welfare of our pupils, but it is necessary that they receive some help in their decisions on moral, ethical, civic, economic, and social questions that affect the life of the child and the home.

It is necessary that we weave daily into class work distinct

concrete examples of ideals of citizenship rather than teach so much by means of drives, posters, billboards, or even topical outlines. Our pupils need to know that names of our great men stand for something, that back of all their great achievements is a life rich in deeds and also rich in lofty ideals. It is not enough to know that Benjamin Franklin wrote *Poor Richard's Almanac,* that George Washington never told a lie and was the father of his country. A close study of the lives of Franklin, Washington, Lincoln, Roosevelt, and others will reveal the active principle that moved these men. It will do more toward developing the right kind of social attitudes than all the rote study of historical data existent.

The group life of every school has within it great social possibilities which should be given opportunity for development. Classroom work and extra-curricular activities, as well, furnish rich fields for social training, the value of which are rarely realized. Participation in club work, student councils, in positions of honor and trust in the administration of a school affords real experience for the students that develop an attitude toward service for others. The result of this training reacts in the classroom work in a more whole-hearted cooperation and a growing feeling of responsibility. In this way students may be trained to conduct meetings according to parliamentary procedure, to respect the will of the majority, to prepare budgets, to handle funds, and to be responsible for and help establish many of the social regulations of the school.

The social objections listed by writers on the social problems of the school, upon investigation we find to include: order, punctuality, neatness, cleanliness, courtesy, thrift, courage to resist evil, training in interests, respect for work, accomplishments gained by steadfast application, independence which comes from paying one's debts and meeting one's obligations, faithful performance of duty, caring for public property, keeping the body a temple for the spirit, to know that nervous energy can be conserved or wasted, that vicious habits bring physical and moral disease and death, development of will and ambition to make the most out of opportunity. These are all good—very good, but the

most important is not mentioned. Why not teach along with the above the one great principle of democracy the doctrine of preparing the individual for that intellectual and emotional sharing in the life and affairs of men, which embodies the spirit of the "Golden Rule." The only measure of our educational values lies in the attitudes, in the dispositions, in the preferences of which the cardinal and enduring results of education are made. Unless these are of the right kind all our training of pupils is of small account. Unless the school gives positive social training the formation of the social sense will be left to accident. True there is good in every individual but to take the risk of allowing the development of this good to come by chance is a hazard that may undermine the very foundations of civil society.

THE PLACE OF EXTRA-CURRICULAR ACTIVITIES IN THE JUNIOR HIGH SCHOOL

William A. Evans
Assistant Principal, Walnut Hills High School, Cincinnati

Briggs has defined the junior high school as an arrangement for the earlier introduction of pre-vocational work and of subjects usually taught in the high school. This definition has been widely accepted. Its application has been made, for the most part, to the subjects themselves. But there can be read into it a larger meaning. One interpretation of this "reading between the lines" will be the purpose of this paper.

The recognition of the school as a medium for training beyond the command of the fundamental processes has given rise to the gradual introduction of extra-curricular activities. We wish to emphasize the educational value of these activities. At first, they were, and in most cases still are, regarded as adjuncts to the school life and were given a perfunctory supervision. This supervision was as much for the protection of the school as for anything else.

Practically none of these high-school activities was carried

on in the intermediate grades. They belonged to the high school, and we will find their greatest development here. Briggs in his definition suggested that the subjects taught in the high school be projected downward into the junior high school. We find that it also is advisable to project downward many of the high-school extra-curricular activities. We are finding use for the extended physical training, athletics, school societies, school paper, clubs, and the like in this new unit.

The aims of secondary education which have been accepted are: Health, command of the fundamental processes, vocation, worthy home membership, citizenship, worthy use of leisure, and ethical culture. Again we must project downward. Certainly, the old type of school will fall far short in some of these aims. In meeting the academic requirements, we have emphasized the command of the fundamental processes. Our success in some of the other aims is questionable. The reason for our failure is that the teaching of the academic subjects does not provide the medium by which we can realize these aims. The extra-curricular activities provide a more suitable means for their presentation and realization.

Extra-curricular activities are not to be considered as something outside of the school. They are fundamental. They merit a place in the school day. They deserve the best supervision we can give them. Our time has been devoted too exclusively to putting over the regular studies. Natural student interest has sufficed for extra-curricular activities. Too few of our junior high school principals grasp the educational possibilities of this field, and very little time has been devoted to the study of it. If the junior high school is to be truly pre-vocational and exploratory, this field cannot be neglected. Recognized leadership and team-work are its very essence, and American citizenship is based on this. The agencies which owe their existence to a capitalization of this interest—the boy scouts, girl scouts, boys' clubs, settlement clubs, junior church organizations—live on what the school thrusts out-of-doors.

Work in extra-curricular activities is wider than the term pre-vocational, it is pre-avocational, also. The junior high school is

committed to exploring and enriching the interests of the pupil. Where will you find a wider field for exploration? How can you give greater aid to his interests? Exploration and differentiation does not consist solely in classifying by mental measurement and rotating through different kinds of shops. All individual differences are not met in this fashion. It will be in the activities that the real boy and the real girl will be met and the aims of secondary education most fully realized.

An article by Dr. Shephard, which appeared in *Good Housekeeping,* and was later summarized in the *Literary Digest,* charges that more than one-half of our social children will, under temptation, lie, cheat, and steal. In rating groups tested, boy scouts rank first and the public-school pupils, ninth. A review of this article will at least reveal that there is something desired in our citizenship which is not taught successfully in the schools, but is taught by outside agencies. This work is being done by volunteers whose ability as teachers is not comparable with the trained teachers of our public schools, yet they are accomplishing something which we are not. May there not be some value in the instrument they are using? It can be listed as one of the extra-curricular activities.

The principal who sets out to realize the aims of secondary education by making use of extra-curricular activities must be well fortified in the conviction that he is right. He must possess an enthusiasm for the ideal which will communicate itself to the members of his teaching force. They will be conservative. He will have to convince them of the validity of such a policy. They in turn must communicate it to the pupils and patrons of the school. Too great haste is fatal, but a sure, progressive program will bring results. Conviction supplemented by hard work will win through discouragements and mistakes, and reveal the true value of extra-curricular activities as a part of our educational policy for the aims of secondary education as applied to the junior high school.

LATIN

Miss Harriet R. Kirby, Presiding

WHO SHALL STUDY LATIN?

E. T. Sage
University of Pittsburgh

There has been a gratifying increase in recent years in the numbers of pupils in the secondary schools who take Latin, but this prosperity brings with it an old problem in intensified form—the problem of who should study Latin. The answer to this question is not the "everyone" of the classical enthusiast or the "no one" of the equally enthusiastic opponent. Scientific methods of selection must be found.

But first we must recognize the fact that Latin became an essential part of the curriculum at a time when the purpose of the school and college course was the production of leaders, and when the school population was drawn from homes of cultural traditions. The change in the character of the source of those who go to school and college, and new ideas as to the purpose of education will tend more and more to make it impossible for the average pupil to succeed in Latin. We must, therefore, recognize the existence, in our school population, of three distinct classes for whom suitable work must be arranged. These are: (1) Pupils of the old type, superior intellectually to the mass, who can profit by the study of Latin taught in the traditional way, for Latin is invaluable in the training of these prospective leaders in society. (2) Pupils somewhat inferior intellectually to the first class, who will need an applied Latin, which will emphasize the value of the subject for English and the contributions of Roman to modern civilization, but who do not need and probably cannot stand the severe discipline of the old course. (3) Those who should not attempt the study of Latin at all, since there is no prospect of success in either type of course. Such a differentiation should help to keep every one at work up to the limit of his capacity, and

should go far toward saving Latin from its unenviable position as a means of driving boys and girls from a school prematurely.

The next point is the method of determining to which class an individual belongs. The ordinary intelligence test will help to identify members of the first and third classes, but it is not sufficient even here, and cannot segregate the members of the more important second class. There is need, therefore, of a prognosis test, including probably some elements of the intelligence test now familiar to all, tests of grammatical knowledge, of visual and auditory memory, and some means still unknown of determining the presence or absence of the quality known as "language sense." We need to know why students of equal capacity do not do equally well in Latin; hence an intelligence test is not enough by itself.

The high percentage of failures in first-year Latin—though Latin is one of the best-taught subjects—gives Latin a bad reputation as an anti-social subject; it causes heavy waste of money and time; it burdens the Latin teacher; it excludes from the chance to study Latin some of the more deserving who could succeed, and it causes hostility to Latin and to the whole school system. For all these reasons methods should be found to determine in advance who should study Latin, and this Latin teachers, once aware of the gravity of the problem, may be counted on to do.

A COMPARISON OF SOME RECENT FIRST-YEAR TEXTS

HAZEL MURRAY
East High School, Cleveland

I. Ideal Text should contain the following:
   1. Vocabulary.
   2. Provision for Drill.
   3. Connected Reading.
   4. Reviews.
   5. Contact with the English Language.
   6. Mechanics.

II. Examination was made of six Texts with reference to the above standards.

EXPERIMENTING WITH CAESAR CLASSES

ELINOR J. BARNES
Lash High School, Zanesville

The greatest aim of the Caesar teacher should be to make Latin interesting to the lively high-school people of today, and to show the relation of Latin and Caesar to the subjects in the high-school curriculum.

Results may be obtained by using some or all of the suggestions which follow.

The reading content should be changed. Something is needed beyond the military Caesar.

Word order should be more effectively studied. Syntax should be presented in a variety of ways, and may be well handled in connection with prose composition. Constant reviewing of forms is necessary. For this the Latin games of the noun and verb have been helpful.

Interesting work has been carried on by the use of the Pressey Syntax Test and intelligence tests. In this manner we compare the intelligent quotient of our students with their Latin work, with their work in other subjects, and so forth. It is interesting to ascertain what subjects are preferred by the student and why.

Extra-curricular activities serve as an incentive for many students. Latin Clubs arouse interest. Special reports assigned, not to the entire class, but to one only, increase competition, and hence interest. These reports are not necessarily on Latin subjects, but on something connected with classroom work. This is advantageous as it leads to the general knowledge, training, and character building of the class. Sections should not be kept right together. It is impossible if the best results are to be obtained.

HIGH-SCHOOL LATIN UNDER THE COMPULSORY EDUCATION LAW

HARRY L. SENGER
Woodward High School, Cincinnati

There have always been a large number of failures in the first and second years of high-school Latin.

The present compulsory attendance law has operated in certain high schools to increase the attendance of those doomed to absolute failure in Latin.

The writer finds repeating classes do not offer the most satisfactory help. There are objections to lowering the standards which could never be made low enough to come down to the intellectual level of all children. Better than these remedies is the prognosis and elimination of certain failures early in the year.

From his own experience the writer concludes that teachers are able without danger of error to forecast the utter failure of a number of pupils out of practically every first-year class.

Teachers in Woodward High School have designated such pupils after the first six weeks of the year. The principal then upon consultation with the pupils and parents had the pupils drop the subject and concentrate upon other subjects.

The writer believes that by eliminating these certain failures considerable waste in Latin teaching may be avoided.

MATHEMATICS

C. L. Arnold, Ohio State University, Presiding

THE COURSE OF STUDY IN JUNIOR HIGH-SCHOOL MATHEMATICS

Emma Kerstnig

Lafayette Bloom Junior High School, Cincinnati

One of the principal objectives in junior high-school mathematics is to assist the early adolescent in determining whether or not he has any particular love for mathematics so that he will want to continue the study of mathematics beyond the ninth-school year.

The appreciative aim should receive considerable attention in the secondary schools. An impersonal love for beauty and for nature seems to be more prominent at this period than ever before. The adolescent shows a passion for the beautiful and his appreciation is sincere. Aside from learning he grows by what he appreciates.

Appreciation in mathematics is an estimation of its value and of its influence in the progress of civilization. Appreciation of mathematical achievement calls for an ability which is much more widely scattered in the race than is the ability to be mathematically skillful. The teacher who considers appreciation one of the aims of mathematics will, by enriching and vitalizing the study, instill into the pupil a liking for mathematics.

It is fitting and proper that appreciation should be one of the aims of junior high-school mathematics. At the very outset the teacher needs to learn the interests of the early adolescent. By learning the interests of the youth the instructor appeals to the children, and this direct call leads to an enthusiastic return.

Great harm can be done in forcing adult standards upon children. To acquaint a child of 13 years with the proceedings of the stock exchange may kill all love for mathematics; but to teach stocks and bonds as an appreciation will result in most instances in a liking for mathematics. The teacher must see the world

through the eyes of the youth. She must be sympathetic with the childish point of view.

Often the child enters the seventh year with a hostile attitude toward mathematics due to the associations of home and of friends or other circumstances. This state of mind must change so that the real, animating spirit of mathematics is brought out.

To understand, to have the ability to analyze a mathematical situation, or to pick out the flaws is not appreciation. Understanding is necessary, but appreciation goes far beyond understanding. The intellectual factor and the emotional tone are not absolutely dependent upon each other.

The pupil selects certain elements of the explanation for closer scrutiny thereby substituting one part for the whole. The equation has made the child confident that algebra can explain this mystery and similar ones. Algebra gives a machine which will work. This attempt will aid the pupil to realize that the equation idea is one of the greatest contributions of mathematics to the world.

The finding, the getting, and the knowing of mathematical laws are the greatest contributions of algebra to humanity. It is of utmost importance to have relationship; otherwise, confusion results. These laws have mightier power than any national law. They have stood the test of time and will exist as long as man lives upon the earth. They tell precisely what will happen. Algebra is merely a shorthand system of storing up laws and of making laws. In all practical sciences there is a continual effort to find laws so that one will know in advance when one thing happens, what will happen in another situation.

Types of Teaching

Many times the manner used to introduce a topic will determine the child's future attitude. The first impression influences taste to a great extent. It will repay again and again for the teacher to expend considerable time and thought upon the first lessons. These lessons give a bird's-eye-view of the work. This view is a prediction of what will happen. The pupil receives a panorama of the year's work. Here is where the teacher displays

her true self. The artistic ability of the teacher is displayed in an appreciation lesson. As a saleswoman she creates in the pupil either a desire to study the course or deadens all future interest. The preview is an appetizer. It makes the pupils hungry for what is to come. The technical part of the work is approached with enthusiasm.

The introduction to intuitive geometry should be an appreciation of the common geometric forms in the child's immediate environment. It is impossible to appreciate geometry without a knowledge of form. At the very beginning the child becomes acquainted with the common forms which civilization has found to be a necessity.

Many shapes are a universal economic necessity. The rectangle is the mental activity of man. Through constant experimentation accompanied with limitless patience man has found the rectangle of universal usage. The windows and doors are rectangular because they are easily made and fit into their proper places with ease. Since writing demands length and breadth, the stationery is rectangular. It is an economical necessity that furniture, books, chairs, desks, and countless useful articles are rectangular. The shape of the whole house which is rectangular naturally influences the shape of the objects in the house. Pavements, streets, the different vehicles which travel the streets are rectangular. The planning of the city is for economic reasons, rectangular. We are living in a rectangular civilization. Civilization has found that the rectangle, triangle and circle are a necessity. Many figures are a universal, economical necessity. The construction of civilization is geometry of three dimensions and the right angle. Geometry is a product of civilization. The geometric arrangement of shapes is the most perfect. In the world this is economy. Remove geometry and the world's structure falls.

Excursions to sketch designs found on various buildings will help to appreciate the immediate environment, or observation trips to museums to study the geometric forms of primitive people will result in an appreciation of the work of mankind.

Cumulative reviews are the connecting links of the various parts of the book. The pupil ties together what he has just learned with what he had acquired. The significance of the details of the work completed are observed. He becomes familiar with the whole subject. Under the guidance of the teacher it unfolds the pupil's appreciation.

Most successful is that child who at the close of his ninth year can fully appreciate B. F. Finkel's thought,

> The practical application of mathematics have in all ages redounded to the highest happiness of the human race. It rears magnificent temples and edifices; it bridges our streams and rivers; it sends the railroad car with the speed of wind across the continent; it builds beautiful ships that sail on every sea; it has constructed telegraph and telephone lines and made a messenger of something known to mathematics alone that bears messages of love and peace around the globe; and by these marvelous achievements, it has bound all the nations of the earth in one common brotherhood of man.

ADAPTING GEOMETRY TO THE PRESENT TENTH-GRADE PUPIL

W. E. Lattin
West Technical High School, Cleveland

At the present time an ever-increasing army of the youth of the country, ranging in age from about fourteen to sixteen, present themselves for that particular brand of educational inoculation known as geometry. Contrary to the desires of the instructors and various educational enthusiasts, they seem to show no particular concern as to the ultimate use of the subject. Much that has been said, and will be said in the future, about the very serious business of the preparation for future activity seems to have been lost if it were intended to make these people view with any particular concern or alarm the relation their education may bear to their future existence. In fact it probably may be said that these coming arbiters of the Teapot Dome affairs of the future are entirely oblivious to the gravity of the situations which they may be called upon to face. It may be that a kindly Providence thus intended it.

Educational writers are prone to remark about spending a year on the subject of geometry and demand that the teachers of the subject give an accounting as to the accomplishment. It may not be unfair to call attention to the common American habit of speaking in loose generalities and to call attention at this time to just what this year of geometry means. Taking as a basis the school year of thirty-eight weeks and allowing two weeks for starting and ending semesters, this would allow for a maximum of one hundred and eighty lessons in geometry. As they average forty minutes in length, the total instruction would be one hundred and twenty hours. On the basis of an eight-hour day, this would be fifteen days or two and a half weeks. Note that no allowance has been made for numerous and sundry holidays, rooters' meetings, inspirational auditoriums, and the like—all of which tend to limit the student's time as well as to unfit him for serious work for a period or two after the occurrence. Compared to a bricklayer's or mechanic's apprenticeship of four years, two and one-half weeks cannot really be a matter of such terrible and serious concern as some people would have us believe.

Those of us who in the years past have listened to the complaint that geometry did not do, as it was supposed, the job of teaching people to think, may well ask just how much of this business of teaching people to think ought to be accomplished in two and one-half weeks. If the pupil can even be started on the road to that goal, isn't the accomplishment enough? Anyway in these later days along comes Wells with his *Outline of History* and states the western world, in the past two centuries, has been doing little or no thinking except in the lines of natural science and the language of natural science, mathematics.

It is the purpose of this paper to weigh the values of tenth-grade geometry, first, with respect to information imparted; second, as to the method the student should acquire in the subject; and third, as to the skill which may be developed in the use of the methods.

The question of content has been up for investigation for some considerable time, and it would seem there has developed a considerable uniformity of opinion in regard to what ought to be

expected of the tenth-grade pupils. In practically all the textbooks we find still hanging over traces of the old Greek method which probably tend more to stultify than to develop mental ability in the pupil. As incidents of this kind one may well catalogue the question of incommensurability, which belongs to a rather abstract phase of the theory of numbers, and is certainly undesirable for the tenth-grader. He has not reached an age where anyone would be warranted in taking any time to develop the necessary background in order for the subject to be anything except a meaningless jumble of words. Another example of the same kind is the attempt to initiate the idea of area from the standpoint of the ratio of area in various figures. No second-year high-school pupil sees any logical necessity for a treatment of this kind, and it is very doubtful if the introductory theorems have any real meaning to him. It would seem that they could be as well omitted. A third idea along this same line is the present treatment of the regular polygon and the application of the ideas involved to the limiting figure, the circle. It seems to be unduly heavy and roundabout. A more modern phase of geometry text is the treatment of ratio and proportion from the equational standpoint. It is very doubtful if teachers of the subject get any worth-while results from the efforts of their classes along this line. Certainly a treatment of the subject from the standpoint of arithmetic with the induction of ideas by the use of algebra is much more rational to the pupil. But for these exceptions, there is little in the modern textbooks in the way of main line theorems that ought not become the property of the average student and add to his general information content.

With these criticisms of the content of the ordinary geometry text, let us pass to the second question as to the method the student should acquire in the subject. One ought to be very explicit in stating just what he considers the scientific method to be. On every hand we find the assumption that the individual with a large and varied amount of information is the individual of proportionately large intellectual capacity. There is doubtless a certain degree of correlation between information and intellectual capacity but it is certainly not as close as most people believe.

It is this confusing of the two which leads to the common criticism of education failing to measure up to true standard. The old Greek philosopher who is reported to have had chiseled before the door of his school the phrase, "Let no one ignorant of geometry enter here," was certainly not interested in the informational content of the subject; nor by any stretch of the imagination can one conceive that his interest lay in any practical applications which might be made after a study of the content. He was using geometry as a scale by which to measure the possibilities of his students in that mental process we call thinking. Taking the viewpoint that the great aim of education is to fit the individual for this mental process rather than to furnish an extended informational content makes it necessary to consider the value geometry may be in accomplishing that end.

The tenth-grader who comes to class for the purpose of geometry has probably used scientific processes very little in the previous nine years of his education. Practically all his time has been taken in gaining information. The basis of the work has been the memory faculty. There has been little opportunity, to be sure, in arithmetic for thinking processes and a few have utilized that opportunity well. Very few indeed, however, have been able to use the process to any extent in any of their other subjects. It cannot be doubted that the average pupil in first-year algebra finds himself mentally in a subject beyond his capacity. The result in most instances is that whatever is accomplished is by memorizing rules of procedure and is in the nature of technique rather than understanding and development of principles involved. Finding the process difficult, unless very carefully safe-guarded the pupil will resort to his only alternative, the use of memory. Few pupils of this age would ever be able to distinguish between the definitions in a scientific subject which demand pure memory and the thought process which demands building up a content from that which has been previously explored. It is no wonder then that the pupil has a tendency to substitute memory, and certainly in the ordinary text every opportunity is given for the substitution. When he sees that theorem nicely worked out almost to the minutest detail, it is the most natural thing in the world for him

to apply the memorizing process. The result is memory work and the foregoing of another shackle which absolutely defeats the end in view. The main problem of the geometry teacher must be to eliminate this memory process and to substitute the thought process.

It has too often been assumed that the so-called exercise in geometry would develop the reasoning faculty—but isn't it a fact that the human mind works inductively and the ordinary exercise demands deductive processes. Consequently the exercise is not the means by which to attain the goal.

Any group of normally developed tenth-graders can enter the subject of geometry and with carefully selected direction can develop the main ideas absolutely independently of any theorem demonstration in a textbook. The individual development of the subject gives an appreciation of the subject which cannot be gained by the study of the theorem as it is presented in its worked out form. The necessity for axioms, definitions, and carefully selected gradations in classifications takes on new meaning to a pupil who is developing his own ideas. Development by the individual gives him a confidence which never can be acquired through studying the pages of some previously worked out ideas. A considerable factor in this process is a new appreciation of the necessity for the use of language, inasmuch as the pupil has to think out his ideas and then write them and be sure he is writing what he thinks. Development of the ordinary content of geometry will certain give a mastery which cannot be acquired without laborious toil under the old methods and will inspire a confidence in the individual as to his ability to use scientific methods.

The parody on one of our Amercan gems of poetry, found on the fly-leaf of the textbook of a really excellent pupil is indicative of how the subject may be studied with absolutely no comprehension or appreciation of scientific development. Here it is:

Build thee worse theorems, oh! my book,
    As through the pages I but look.
Let each new theorem more deadly than the last,
Sink me in dark dismay more vast,
    Till I at last am free,
Gaining a credit in geometry.

It is idle to expect the teacher of geometry to develop the process of thinking to a point where it will carry over of its own accord into all the pupil's other subjects and make the individual a thinker. It ought not to be impossible, however, to initiate the process and to give the pupil an appreciation of scientific methods which will furnish a foundation upon which the later instructors can build. If the teachers of all subjects will accept the proposition that the development of the thinking mind is the ultimate aim of education and do everything in their power to direct the pupil toward that goal, although it may never be reached, still we may rest assured that very definite and measurable progress will be made.

MODERN LANGUAGE

G. R. Havens, Ohio State University, Presiding

STANDARDS IN MODERN LANGUAGE TEACHING

J. P. W. Crawford
University of Pennsylvania

We need to develop a professional spirit that will make us realize more keenly that our subject has a scientific basis which is constantly undergoing modification, and that we must not only acquaint ourselves with each advance that is made, but that we must also contribute, to some extent at least, by our own experimentation.

When a patient presents himself in a doctor's office for the first time, he is given a thorough examination. We reserve our examinations until the treatment has been in progress several months and during this period our incurables have been wasting their time. Usually we know next to nothing about the antecedents and intellectual condition of our patients when we first meet them in class. It is our plain duty to eliminate the incurables before we begin treatment, and we must learn as much as possible regarding the curables before we begin to experiment with them.

After obtaining this information, we surely should not give all the same treatment. Sectioning according to aptitude or preference is preferable to sectioning according to ability. Oralists and readers should have a different program of study. In neither group should the translation of English into the foreign language be regarded as an end in itself. Disconnected sentences whose sole justification lies in the fact that they illustrate difficult points of grammar, should be banned altogether.

We need a higher standard of correlation between our own work and other subjects in the curriculum. We can contribute largely to a more intelligent understanding of the English vocabulary without loss of time, and we have many points of contact with the department of American history which we frequently overlook. The study of Spanish and French would assume a new interest if students acquainted themselves in a more definite way

with the unparalleled effort of Spanish and French discoverers and missionaries in settling and humanizing vast areas of our own country.

We should try to make our textbooks correspond more closely to the needs and capacities of students. In elementary high-school work success with the direct method is difficult of attainment unless based upon charts or pictures, and yet of these only a restricted use is made. Literary texts should be adapted to the needs of beginners by eliminating extraneous matter and by simplifying the vocabulary and grammatical constructions. The present tendency to relegate to the vocabulary difficult idioms or constructions is unwise. It is important for the student to know what a phrase means in English, but it is still more important for him to understand its construction, so that he may know its meaning when he meets it again in slightly different form. Frequently a difficult construction is best explained by giving its equivalent in a simpler form in the foreign language. When vocabularies are included, they should be accurate, and the vocabulary should be banned entirely from texts intended for third-year and more advanced students.

We need higher standards in our own academic equipment. Every true teacher must inform himself regarding the new developments in his subject—the new concepts or new methods which the productive scholars evolve each year, and, by so doing, he distinguishes himself from the soulless teacher who is content to repeat exploded notions from an antiquated textbook without dreaming of the advances made since he was a student in a college or a graduate school. Those who abandon the quest for knowledge and devote their physical energies to the deadly monotony of a form of teaching that is unaccompanied by intellectual effort furnish many recruits to the army of discontented teachers who complain that their efforts are inadequately rewarded and who fail to realize that mental inelasticity and intellectual indolence produce failure in other professions and in business as inevitably as in teaching. Others allow roster complications, committee work and the other petty miseries of academic life to stifle the spirit of inquiry that makes us freemen.

NON-BIOLOGICAL SCIENCE

A. W. Smith, Ohio State University, Presiding

WHY SHALL WE TEACH SCIENCE

C. H. Lake
Assistant Superintendent of Schools, Cleveland

It would seem imperative that as we experience daily the marvelous benefits in comfort, food, clothing, shelter, transportation, wealth, and health, which have come to us from the fields of science that we should adopt the spirit and method of science in whatever field of endeavor we may be engaged. Apparently we are very far from doing this thing which seems a perfectly normal and obvious line of action when considered in the abstract.

Education furnishes the hope. The whole world is agreed on this statement, but we seem to be in a most chaotic state when it comes to determining what education is. We find very little difficulty in agreeing on the words, the jargon which has come to be a part of our professional vocabulary. We do find great difficulty in agreeing on the interpretation of these terms when we begin to consider definite procedure. Up to the present time the world has discovered little else in science than that it is a new tool for gaining wealth and power. It is not yet treated as a new method of understanding in the universe in which we live, a new adventure of the mind, a direct way of achieving truth.

For ages we have been governing men and organizing their conduct toward one another by and through the same old superstitions and the machinery of political, economic, and social mysticism. One of the most valuable lessons we may teach in our schools is that of self-government and the lesson would be many times as valuable to those who are older and who are actually engaged in governing themselves. A short few weeks ago we had the example of a state legislature with extraordinarily stolid and solemn imbecility actually voting that one of the most brilliant scientific hypotheses was wrong and should not be permitted as

a part of the teachings of the state school system. Their idea seemed to be that they were getting back to fundamentals.

The scientists quite often have been at fault. They have taken a rather aloof attitude and have been afraid to do anything which would tend to popularize their work. This attitude has apparently come from the idea that they would lower their standing with their colleagues and contemporaries if they did anything which might smack of publicity. The scientists have at times been too much concerned with the cold intellectuality of their pursuits. We are far from sure that many current beliefs are based upon fact.

The world is entirely too important, and its interests are quite too precious for it to be the plaything of those who have inherited little else than the accumulated prejudices of the ages. Nations must cease to be the playthings of political intriguers and bosses, as well as kings and social destiny. They must also cease to be the stake in a game where ignorance holds a hand with the utmost complacency.

Society is suffering not merely so much from unbalanced budgets as from wrong mental processes. Many of these processes have become institutions, which are nothing more or less than stereotyped and quite often ossified social habits; what we think about these institutions determines right and wrong.

Sloganizing is quite popular in these days. "The full dinner pail," "Three-cent fare," "Remember the Maine," "A business administration" are types of slogans which a clever thinker puts into the mouths of crowds who weakly imagine that they are thinking and that these terms combined with the proper gestures such as flag waving, and vociferous statements of "hundred percentism" will produce the formula for social regeneration.

Probably the worst thing is that the use of trained analytical intelligence is represented in such minority in government, and is quite completely controlled by government. Now as a result, our social organization is controlling science without being in any sense scientific itself. The cure will require that science must become interested and influential in social control instead of being a plaything for the amusement of our social agencies.

The world has accepted the scientific viewpoint as regards science. We carry very little shelf-worn material in our stock of scientific knowledge. The truth is predominant in the realm of science, and the world does not hesitate a moment to discard an old theory for a new truth. This isn't so true with religion, politics, social science, and the philosophy of education. We have changed rather slowly in these fields, the ultimate truths are not so easily demonstrable as in the field of natural science and our inherent inertia opposes any change which cannot be proved expedient and desirable. Our residual prehistoric natures stiffen and balk at most attempts to supplant our century old inherited ideas concerning these things.

The schools can do a very great deal, and if we, as educators, are to be true to the principles of our leadership—which I suspect at times is little more than a statement of a ritualistic formula—we should be active in giving impetus to the movement. All phases of school work will be approached in the same spirit as natural science is approached. The social, economic, and political factors which produce a strike of anthracite coal miners or a world war probably follow laws which are just as immutable as the laws of gravitation. Our pupils are interested in causes as well as a recital of results, and the study of history should be approached from that standpoint. We should not despair of the apparently small results obtainable. One teacher, one school, applying the scientific method and developing the scientific attitude toward the problems about us will leave its imprint on society and the world.

SOME SUGGESTIONS ON TEACHING STUDENTS HOW TO STUDY

C. W. Foulk
Ohio State University

The author believes that the principles of studying advanced below are of general application, but since he is a chemist, the

specific applications and illustrations have all been from that science, and in order to reach the largest number they have been taken from elementary chemistry though the author does not teach that subject.

At least ninety percent of the students in the author's university classes seem to have no effective plan of studying. Brute force of memory is their only procedure, and they seem never even to have heard of association as an aid to memory and look incredulous when told that the best way to remember item A is to associate items B and C with it.

The books on studying which might be put into the hands of such students, though excellent and helpful, rather belie their titles—for they are not books on how to study. They are books on the psychology of studying, on getting ready to study, and the like. They get the student to his study table and leave him there. What is wanted are laboratory manuals on studying. The student is as ignorant of the art of effective studying as he is of the art of chemical experimentation and therefore needs a laboratory manual on studying as much as he needs a laboratory manual in chemistry and, it might be added, he needs a competent laboratory assistant in studying even more than he needs one in chemistry.

The author's warrant for presuming to write or speak on the art of effective studying lies in the fact that during the last dozen years he has endeavored to lead his students to use the rules for studying as outlined below and has over this time consistently directed his examinations and quizzes so as to force as far as possible this method of studying. Be it good or bad, there is at least a fund of experience to offer.

How to Study Chemistry

I. Read the assignment from beginning to end. During this reading make no effort to remember anything but make every possible effort to grasp the kind of information in what was read and the chemical generalizations which are conveyed or illustrated.

II. Begin again at the first page and go over the assignment the second time without reading it, but by noting the section, subsection, and paragraph headings, try to get a firmer hold of the main points which the assignment is intended to teach than

was obtained during the first reading. For example, (1) note whether the chapter read is largely descriptive of some substance or group of substances, or whether it deals with certain of the general laws of chemistry; (2) if the chapter is general in character, note whether it contains carefully formulated definitions. If so, mark these to be learned. Note what illustrations are given as experimental proofs of the theories advanced. If the chapter is a descriptive one, note the outstanding properties of the substances described.

Once more let it be emphasized that in this survey of the assignment no thought is to be given to remembering anything. The point is to classify the material of the assignment and get a grasp of its meaning.

III. Begin now with the details of the assignment. (1) If there are formal definitions, learn them, just as they are in the book. (2) In addition to the formal definitions there is always a certain amount of other less exact memory work in an assignment. Deliberately choose half a dozen topics that in your opinion are important, and learn at least 51 percent of the items of information under each topic. In choosing the important topics you must be guided by your own judgment, but the book itself though rarely deliberately naming topics in the order of importance gives nevertheless a great deal of information.

IV. Go over the assignment once more as given in II. Above all things else be able to answer the questions, What kinds of information are in the assignment? and What is it expected to teach me?

General Notes

The most important point in studying chemistry is the diligent cultivation of the habit of noting what a chapter, section, or paragraph is about, rather than the common habit of trying to remember the specific items of information.

"Noting what a piece of writing is about" means making a mental, general observation concerning the kind of information in it or the point of view from which it is written.

Example: Suppose that a student has read the following paragraph from an elementary chemistry: *"Viscosity of liquids.* Some liquids flow very freely and drop from tubes of small bore in very little drops. Others flow slowly and tend to form large drops. This resistance to flow is called *viscosity*, the opposite term being *fluidity*. A slow-flowing liquid is said to have high viscosity or to be viscous." On reading this paragraph the following mental observations should be made, definition or "viscosity of liquids"; name of the opposite property; and simple test for distinguishing between high and low viscosity.

Always treat titles of chapters, sections, or paragraphs merely as catchwords or phrases to attract the eye. They generally do not express what the matter is about and therefore the student should avoid their use in that way.

Example: The paragraph quoted above has a black letter title *"Viscosity of liquids."* This is only a catch phrase and does not in any way describe the kind of information in the paragraph, other than that it is something about viscosity of liquids. There is nothing in it, for instance, about the variation of viscosity with the temperature.

In an elementary chemistry there are in those chapters which describe specific substances a number of regularly recurring topics, such as, physical properties, chemical properties, history, occurrence, preparation, use, and the like. It is a wise study plan to analyze these frequently recurring paragraphs and note once for all the nature of the information that they contain. For example, the occurrence of a substance is described under the following headings: is it free or combinded; if combined, the common forms of combination; the geographical distribution! human interest point, does it occur in the human body; does it occur anywhere but on the earth, and similar questions? With these general points of view in mind, it will be found easy to remember the items in the "occurrence" of any substance. Without these general points in mind they have to be learned over and over again every time the paragraph on occurrence is studied for a new substance.

It also should be noted that most substances possess some property to an outstanding degree. This fact will usually be mentioned. For example the lightest and the heaviest substance are sure to be thus characterized.

For learning the matter in a paragraph or section of an assignment use the following procedure. (1) Read the paragraph and while reading, mentally note the individual points or statements as they occur. (2) Look away from the page and see how many of these points you can enumerate. (3) Refresh your memory by running the eye over the section again and again and try to enumerate the points.

Example: Below is a copy of a paragraph from an elementary chemistry. "Inasmuch as ammonia is formed in certain natural processes which are constantly taking place about us, such as the decay of nitrogenous organic matter, it is easy to understand why this compound has been known for so long a time. It was originally prepared by heating such tissues as the hoofs and horns of animals, and the aqueous solution of the gas so obtained was termed spirits of hartshorn. The pure gas itself was first prepared by Priestly, in 1774, and its composition was determined soon after by the French chemist Berthollet."

The points in this paragraph are: (1) Ammonia is formed in natural processes; (2) that are going on about us; (3) decay; (4) hence it is easy to see why the compound has been known a long time; (5) originally prepared by heating horns and hoofs; (6) water solution formerly called spirits of hartshorn; (7) pure gas first prepared by Priestly in 1774; (8) in 1774; (9) composition determined by Frenchman Berthollet; (10) soon after 1774.

Here are ten statements. Each one should be noted mentally as a separate point while reading the paragraph. Next, look away from the page and see how many can be recalled. Points 1, 2, 3, and 4 are the most important ones. If you want to remember the date of Priestly's experiment, do it this way: there are two elements in ammonia and the date was two years before the Declaration of Independence.

The way to study an experiment as it is described in the textbook is (1) to note what the experiment is intended to illus-

trate or to prove; (2) to comprehend how the outcome of the experiment illustrates or proves the chemical statement made; and (3) to distinguish clearly between what the apparatus accomplishes and *how* it accomplishes it.

Example: In the experiment of Dumas to prove the composition of water. (1) The experiment is intended to show the composition of water by weight. (2) It does this by causing a known weight of oxygen to unite with hydrogen (weight not directly) and then obtaining the weight of the water formed. (3) The apparatus accomplishes the bringing of pure dry hydrogen into contact with hot copper oxide and provides for collecting the water formed so that its weight can be found. The engineering problem involved in designing and constructing an apparatus to do this can be shown only by a sketch. This last item is however by no means so important as the others in studying the experiment.

In closing this abstract the author cannot but fear that his meaning has not been made clear because space does not permit a sufficient number of illustrations. Perhaps this will help: The boy who reads "Gold is yellow" and remembers "Gold is yellow" and later recites "Gold is yellow" has not studied; but the boy who reads "Gold is yellow" and then looks away from the page and says "I have learned the color of gold," has studied.

PHYSIOGRAPHY AND ITS RELATION TO PHYSICS AND CHEMISTRY

F. A. Carlson
Ohio State University

Physiography as a high-school subject is rapidly passing into obscurity. This unfortunate situation can be explained in part on the basis of such well-known facts as untrained teachers in physiography and the recent demand for commercial geography. The major reason, however, for the exclusion of physiography from the high-school curriculum can be attributed to an erroneous determination of its value. The fact that physiography offers an opportunitly to investigate the physical features of the earth represents only a minor part of its importance as a high-school subject. Its true significance rests in the possibilities which it offers in the application and organization of allied subjects, es-

pecially physics and chemistry. It brings before the student daily problems in physics and chemistry in the form of climatic changes, weathering, erosion, and the like, which would not have been fully appreciated or possibly not recognized without a training in the principles of physiography.

These practical illustrations are not only essential in the development of physiography but are of equal value in showing the importance of physics and chemistry. Furthermore, the contents of physiography are of such a nature that they permit a wide scope of reasoning and the organization of scientific facts on the part of the student. There is practically no chance for either teacher or student to prove his worth in physiography on the basis of memorizing physiographic principles without an understanding of their meaning because of the variability of the application of such principles. It seems perfectly obvious that if the importance of the correlation and the organization of subject matter is to be recognized then physiography should have an undisputed position in the high-school curriculum.

THE IMPORTANCE OF SCIENCE IN HIGH-SCHOOL EDUCATION

M. A. Bigelow
Teachers College, Columbia University, New York

There is stimulation to a searching review of our own work as teachers of the natural sciences in the fact that the intelligent public back of the schools is very critical of our science teaching. The time has come when the rank and file of science teachers must not only know well the subject matter of their sciences but they must know better methods of teaching and better selection of the facts to be taught. All of this means that we science teachers must appreciate fully the importance of sciences in high schools, for only as we know what is important can we prepare for science teaching, plan our teaching, and teach by the most efficient methods.

Concerning the values or importance of sciences in high schools

and how to get or develop these values by better teaching, we should first consider how far the sciences are valuable in general education. Next show how far the high school may be expected to present the sciences for their use in the everyday life of the average citizen.

Science played such an all-important part in the Great War that the average intelligent citizen stood for a time in favor of more and better science in our public educational system. Unfortunately, this great post-war interest in sciences for general education which seemed so much in demand in 1918 has gone along with many ideals of "a world safe for democracy," "a universal peace-enforcing league," and many others.

We must begin to emphasize the fact that in the applications of science to human life "peace hath her victories no less than war." It is the science of peace-time, not the science of war-time, that must now be stressed in general education.

The greatest difficulty science teachers face in trying to present and arouse curiosity in the wonders of science is that so many of these wonders are so commonplace that only the scientific mind continues to marvel and wants the explanation.

This problem of inciting scientific curiosity is the biggest one standing in the way of securing universal recognition of the great importance of science in high-school education.

What subject matter of sciences is worth while because it affects the life of the average citizen? I agree completely with all the arguments for science because it has many direct bearings on the material or physical side of human life. For the purposes of education, I believe in "applied science" which stresses science as it economically or hygienically affects mankind; but science limited to its direct usefulness, to its contributions to physical human welfare fails to develop the full possibilities of science as it may affect life. Hence, I ask your attention for a few minutes to the need of science in general education because it concerns our intellectual life, or, as some prefer to say, our philosophy of life.

I have come to believe that phases of science which have a purely physical application to human welfare, such as chemistry

and physics, bacteria and disease, or biology applied to agriculture, are not more important for the average educated citizen than a general understanding of the great principles of science such as evolution, cells, atoms, electrons, energy, gravitation, radio-activity, and many other great principles of modern science.

Summarizing the educational values of the subject matter of science, intelligent citizens should stand for science which functions in daily life: (1) because scientific knowledge is useful in practical or material or physical affairs, such as those which are industrial or economic, and (2) because science definitely concerns intellectual life. In general, we should give the practical side considerable emphasis in our teaching because the world of today demands science which concerns the material or economic or industrial side of life. While thus advocating applied science, in its usual sense, we should remember that for many, perhaps the majority of, thinking men and women science study may be most valuable because its principles and great ideas affect profoundly the intellectual life in which science must inevitably relate to many other aspects of human knowledge and to one's own philosophy which must determine the individual's attitude towards humanity.

Good methods and useful facts must go together to make high-school science important. The old view that science deserves teaching for the purpose of forming a mental habit, which we used to call the "scientific attitude of mind" because we suppose that science study developed a peculiar logical mind, was merely an innocent conceit of the scientists which educational psychology quickly annihilated. However, while science teachers have lost belief in the peculiar disciplinary value of science study, they still have strong faith in the importance of special methods of teaching science because in the laboratory and demonstration work they find the most efficient presentation of useful information. In short, it seems to me that henceforth we must center all the problems of teaching sciences around its subject matter considered as applied science.

All, then, we can claim for the so-called disciplinary value of laboratory science is its splendid, but not monopolized, not

peculiar, opportunity for training in every phase of logical or scientific thinking.

Summarizing, we claim for the laboratory method of sciences: (1) that it is the most efficient method of teaching the selected worth-knowing facts of applied science; (2) its opportunities for practice or training in logical or scientific thinking are unsurpassed by any other subject; and (3) it tends to develop a habit of applying scientific facts and methods of everyday life.

I have given you only a hasty and superficial view of the importance of sciences in the education of the vast numbers of boys and girls whose high-school education complete their formal preparation for their part in the world's work. For such a purpose, science is second to no other subject whatsoever. Our task as science teachers is to prove that to the world. Coming right down to the ultimate fine analysis, this means making each generation of high-school boys and girls eager and curious to know how and why the lifeless and the living machinery of this old world continues to run on and on.

PHYSICAL EDUCATION

MEN'S SECTION

W. W. St. John, Ohio State University, Presiding

INTRAMURAL ATHLETICS

G. P. Ward
Ohio State University

1. Scope of Intramural Athletics
   Varsity major sports
   Varsity minor sports
   Other competitive activities
2. Value and extent of awards
   For teams
   For individuals
3. Mechanics of Intramural management
   Supervision by coaches of varsity major and minor sports
   Supervision by Director of Intramurals
   Student Manager plan
   Effective combination of the above
4. Should Intramurals be
   Compulsory for a term of years
   Voluntary for all time
   Combination of these
   Advantages and disadvantages of each
5. Discussion as to advisability of intercollegiate football in Intramurals
   Failure because of lack of proper equipment
   Failure because of lack of condition of participants
   Experience of schools trying it
6. Discussion of advantages and disadvantages
   Formation of teams into leagues in different sports
   Elimination followed by consolation series
   Team league idea vs. mass athletics theory
7. Methods of creating and keeping interest
   Publicity in college and city newspapers
   Circular letters (mimeographed)
   Posters and advertising
   Personal solicitation and canvass by assistant managers
   Awarding of cups, medals, plaques, or emblems to teams or individuals
   Additional stimulus by giving participants points with suitable award for participation only
   Enlarging scope of activities far beyond those sports of major and minor squads
   Miscellaneous methods. Unorganized groups hardest problem.
8. Best way of grouping participants (advantages and disadvantages)
9. Miscellaneous subjects

How far should university go in furnishing equipment for contests
Should fees be required from teams? from individuals?
Should number of intramural activities in which a student can take part be limited.
Best system of determining how many different individuals participated during university years
Different systems of financing intramural department
Relation of intramurals to gymnasium and intercollegiate activities

Supplementation of Outline of a Few Intramural Problems

As to the scope of activities, I would follow the major and minor sports schedule, with the exception of football, as here listed (regular varsity sports being omitted): soccer, indoor baseball, foul shooting, bowling, boxing, handball, hockey, skating, playground ball, horseshoe pitching, swimming, speed ball, curling, ice-boat racing, skiing, wand wrestling, water basketball, and volley ball.

Awards are an important factor in intramural work. They should not be too expensive or given a chance for confusion with varsity distinctions. For teams of permanent affiliation, like fraternities, cups are favored; and of non-permament, charms or medals. Numerals are favored in the case of sports on a college, department or class basis.

The most effective plan of intramural organization, however, is that which has one director in charge, this specialist to be assisted by a corps of student managers. The student-manager plan is at present the most effective way of securing the assistance needed to cover the wide field of this work and the many details. The student assistants should be rewarded for their work. The one or two men selected as senior managers should receive the varsity manager's letter.

There is a difference of opinion as to whether intramural athletics should be compulsory or not. The argument against such plan is that it detracts from the enjoyment in the participation and reduces it to the routine status in which gymnastics and military drill are now considered. The argument in favor is that it reaches the great number of students not being touched at

present, and that compulsion does not lessen the attractiveness of athletic sports.

Football is shown to have but limited value as an intramural sport. In many institutions it has been dropped entirely because of two reasons: lack of equipment and lack of condition. Participation in football should be limited to a very few teams that can be closely supervised, and students should be shifted to less strenuous sports.

The league plan is advocated whenever possible, with the elimination plan followed by a consolation series, as an alternate whenever facilities do not permit the first method. The narrowing down of participants through the qualification plan is the third preference.

Much follow-up work needs to be done in creating interest. Publicity in the school paper, circular letters, and personal phoning or solicitation to those teams not entered is the plan most used.

The point system, namely, giving grades to each fraternity for its showing in each sport, including a minimum grade for entering, is almost 100 percent efficient in getting the fraternity out for competition. Class "B" leagues in some of the fraternity sports has proved successful.

There is a big field open for working out an effective individual-point system along the general idea of that carried on so successfully with fraternity groups.

The fraternity men are being reached more than are the independents. This is due to the fact that the unit binding a fraternity man is so much closer. The church, boarding club, and independent leagues are fairly successful. The residential plan should be given a thorough try-out.

Most of the schools charge an entrance fee where a team entrance is made. This is successful in deterring teams from entering and then failing to take part.

The aim of intramural work is to correlate and cooperate with varsity sports, each department being a stimulus and aid to the other. The increased chance for promotion of intramural activities has been one of the big arguments advanced in the recent stadium drives.

All necessary appropriations should be obtained through the university. The intramural department being the largest single department of the school, should be put on a dignified and stable basis, and entirely removed from dependence on philanthropic support.

Intramural work is the most desirable field in college athletics at the present time. It has the support of all people interested in the educational side of athletics. The next ten years will see tremendous developments.

A STUDY OF MEASURING ABILITY IN RELATION TO VARIOUS TYPES OF INSTRUCTION IN PHYSICAL EDUCATION

THOMAS NEIL
Western Reserve University

The material used was the direction part of the Army Intelligence Test, supplemented by three problems from the direction part of an intelligence test worked out by Dr. Myers, head of the Department of Psychology, of the Cleveland School of Education.

These tests were given to four groups of men, at the beginning and at the end of the first semester, 1923-24. The four groups were as follows: (1) Adelbert freshmen who took the regular gymnasium work throughout the semester, 116 in number. (2) Adelbert freshmen who had no previous athletic experience and were limited to instruction in football, wrestling, and boxing, throughout the semester, 21 in number. (3) Adelbert freshmen who had high-school athletic experience and were limited to instruction in football, wrestling, and boxing throughout the semester, 19 in number. And (4) Pharmacy-school freshmen, who had no organized form of activities in physical education, 48 in number. These four groups were practically the same in scholastic standings, taking their high-school averages as a basis of comparison.

The number of points scored for correct solution of each problem was in proportion to the number of times that problem was missed on the first test. Three hundred and seventy-six men took the test the first time. This gave a possible score of 134 points.

Table I gives the results of the two tests for the four groups.

TABLE I RESULTS OF THE TWO TESTS

	First test Average	Sec. test Average	Increase Points	Increase Percent
Adelbert Freshmen— taking regular course.....	43.78	68.92	25.14	57.4
Athletic instructions— no previous experience.....	41.	61.33	20.33	49.5
Athletics instructions— previous experience	48.68	54.94	6.26	13.
No organized physical activities	46.9	50.6	3.7	7.9

The individual scores for each group, show a close correlation with the individual scholastic standing for each group.

Table II shows the increase in points scored and the percent of increase on the second test as compared with the results of the first test for the various groups, determined by their average scholastic standing for the first semester 1923-24. The method of scholastic grading is as follows: E, 90 to 100;G, 80 to 90; F, 70 to 80; and P, 60 to 70.

TABLE II

	First test Average	Sec. test Average	Increase Points	Increase Percent
Above G+	50.8	83.8	33	64.9
G+	54.8	92.8	38	69.5
G	55	88	33	60
G—	42.8	74.3	31.5	73.5
F+	45.5	72.8	27.3	60
F	43.4	66.1	22.7	52.3
F—	39.8	62	22.2	55.7
Below F	34.6	51.5	16.9	48.8

CARE AND TREATMENT OF ATHLETIC INJURIES

WM. F. ROBERTS
Ohio Wesleyan University

Athletic injuries require the attention of the college physician, the coach, and trainer. Although they tend to occur in all our activities, they assume paramount importance during the football season. Our attention will be given to injuries incurred in this sport. It may not be amiss, then, for us to spend a little time in a review of the situation. This paper will present the subject under three headings, prophylaxis against injury, treatment of injuries that occur, and a word of caution as to the attitude toward the injured man after the season is over.

It seems to be the opinion at the outstanding universities that these matters should head up in the Department of Hygiene or whatever the department which has to do with student health. It may be that the college physician is the active field surgeon or that a physician appointed through the department of health functions as surgeon in charge. Whatever the relationship, the Department of Health is responsible for the care of the student participating in the sport.

Prophylaxis Against Injury.—This refers, first of all, to the sanction of the college examining physician that the applicant for football is able, from a physical standpoint, to play and that he has good heart, lungs, kidneys, bones, joints, and musculature compatible with the sport, not to mention the absence of hernia, proximity of operation, bad tonsils, and poor teeth. It means also that it is the duty of the college physician to see to it that a man who is good in all respects, save an undertoned condition, is put in condition to begin his active training. Again he should see that men are properly protected by strapping, pack, special apparatus against injury based upon the findings in the examination of the individual. This is of special importance when a man with certain types of injury returns to the game. Again he should see that the exhausted man is removed from the game, for such a man, no matter how good he has been, is a hindrance to his mates and runs a great chance of being severely injured, since

he cannot handle himself well. There are many other things you think of come under this head.

Treatment of Injuries.—What are the types of injury in football these days? Years ago when mass plays were the thing and little protection was worn, the injuries received were much different from those they are today. With the advent of the open style of play and with emphasis on protection in the contestant's outfit we have these types of injuries. Furthermore the slugging and roughing of former years has been minimized to a great extent with happy results. In those days head injuries varying from severe concussion up to fractured skulls were not uncommon. Today we have our head injuries, but are free of concussion. With the introduction of protecting apparatus such as the shoulder pad, muscle bruises are in evidence due in this case to the impact of the heavy shoulder pad against the wearer's antagonist in tackling. Proper padding takes care of that. The change in the football shoe, the long cleats, has emphasized ankle and knee injuries. This fixes that foot firmly to the ground, and if the runner attempts to turn quickly, the foot being freed, the knee or ankle twists. Then we have a good number of knee injuries: synovitis, strained ligaments, chiefly lateral; partial dislocation of semi-luna cartilages. Here extra strapping of ankles and knees is necessary as a prevention and possible instructing the player to turn with his whole body or to change his direction when running when cleats are clear of the ground. Added to these just mentioned as you will know are injuries at the shoulder joint, bruises inperpual or deep in nature of any portion of the body and the more serious injuries to the internal organs which are rare.

After an injury I think you will all agree that the immediate thing is rest and prompt treatment. The simpler bruises may be cleaned up, warmed up, and massaged at once and daily until the condition is removed. Where tenderness is great, massage may be put off for a day. Injuries of major importance should find their place at the hospital.

For the pain incident to these injuries, sprain, synovitis, muscle bruises, etc., heat, packs (hot or cold) are very useful. Strap-

ping is of service, but it must not be put on tight enough to interfere with the circulation and the limb should be used to shape the strapping to it, for strapping is but a form of cast against which the muscles act in exuding from themselves collected fluid. As much use as is consistent with the condition should be permitted, movement helps to remove exudate and prevents atrophy of muscles, scar tissues, and adhesions.

In ordinary sprains and strains massage may be begun in twenty-four hours and in seventy-two hours after the height of the reaction has passed in synovitis. Compression bandages may be used to advantage, either the rubber or the woven elastic. The former is stiffer and interferes more with circulation.

The concensus of opinion seems to be against the use of apparatus such as plaster casts, wooden splints, and steel fixation braces. A few days usually takes care of the situation without these and we do not run the danger of muscle atrophy. Cook of Yale believes that crutches and braces are often used too long following simple injuries. If the limb is strapped properly they are not necessary as a rule. True, some pain may be present, but that is better than that endured following a long period on crutches when the foot scarcely touches the ground, because with the delay in use muscular atrophy develops and adhesions form which must be broken down before the limb can be used without pain.

When a complete tear of a muscle has taken place or a tendon complete fixature is necessary. In the treatment of fractures special care should be taken to preserve muscle power, to prevent undue formation of adhesions, to maintain action of joints above and below fracture. The use of the X-ray is most important, especially in the questionable case. Use of iodine is all right for cuts, but the wide smearing about joints may lead to the formation of blisters which must heal before further treatment can be given.

All head injuries, involving the possibility of concussion, should come under hospital observation. Injuries to teeth, eyes and nose should be treated by a specialist.

Separation of the acromioclavicular joint is treated by strap-

ping and the arm should be carried in a sling. The arm should be allowed movement to prevent atrophy. Baking and massage help. Severe bruises to the thigh muscles entailing marked swelling impeded movement crippling and at times effusion into the joints demand rest until the height of condition is passed. Hot packs, soaks, and baking will relieve the pain. When tenderness is gone, massage may be used. A compression bandage may be used to help the reduction of exudate. Some suggest tapping when collections of fluid are well localized.

Again in cases of simple synovitis of the knee joint the accepted treatment is early massage to compression for the relief of pain and to permit use. Fixation by splints is contraindicated.

Injuries to the internal lateral ligament are best treated by adhesive strapping starting well below with extra strapping over site of injury. In complete tears fixation is indicated in the extended position until healed.

Reduce dislocation of the internal semiluna cartilage at once and hold in position until healed. When he returns to game he should be protected in addition to pressure bandage with a steel brace.

In case of rupture of crucial ligaments fixation is necessary. After this a brace or knee cage should be worn.

At times there is an inflammation of the tendons of the wrist and ankle. In the case of the wrist, strapping and rest usually takes care of the situation. At the ankle, tendon of Achilles of the tendon of the tibialis anticus, the condition is more difficult to treat. In the case of the former, strapping from well under the heel with the foot in a slightly flexed position and bringing the strap well up on the calf of the leg helps. Cook suggests raising the heel of shoe. In the latter strapping and raising the inner margin of the shoe will take care of condition. This relieves pain and limits movement. Foot strain may be relieved by strapping and in some cases by stiffening the shank of the shoe.

In addition to the method of treatment cited above electrotherapy is coming into vogue in the treatment of athletic injuries.

Diathermy and the polysine currents are the methods used by a number of universities such as Yale, Princeton, Michigan, Wis-

consin, and others. They claim that it hastens the repair processes and prevents atrophy.

Post-Seasonal Attention.—After the season, then what? Should we forget the men who have been injured or should we call them in, note their condition and follow up when treatment is indicated? I believe that it is logical to follow the latter course. Much can be done in selecting cases to correct defects so that another year these men would be of greater value to the team. One striking example would be the so-called weak foot, the beginning flat foot. Again the continued treatment as indicated for joint injuries.

I have not intended this paper to be a detailed and comprehensive account of the treatment of athletic injuries. I hope, however, that I have brought out the importance of prophylaxis; the need for rest and immediate treatment in case of injury, the importance of limiting the movements of the individual under treatment as little as possible consistent with the types of injuries and the treatment aids in repair and prevention of atrophy and adhesion; the importance of the minor treatment after season. Again I trust I leave with you the strategic value in having a surgeon responsible for the condition of your men and as to the treatment of their injuries. His work should be final in these matters.

I desire to acknowledge in closing helpful suggestions from Dr. Richards of Harvard and Dr. Cook of Yale as well as to my associates Messers Freeman and Gauthier in the preparation of this paper.

OHIO RELAYS

G. M. Trautman
Ohio State University

The Ohio Relays are being inaugurated by the Ohio State University because there is a distinct need for this type of track and field competition in the Middle West. It is believed the relays will serve as an excellent stimulus for a more extensive

and intensive track program throughout this section of the country and particularly in Ohio. Ohio State University is located geographically in the center of a great number of educational institutions where friendly rivalry has been traditional over a period of many years, and the Ohio stadium furnishes unsurpassed facilities for the care and comfort of an almost unlimited number of spectators and participants. Because the great variety of events possible in an extensive relay program serves as an agent for the gathering together of a splendid fellowship, it is believed that from the Ohio Relays will come excellent friendship and constructive ideas, healthful contributions to the finer things in the broad field of competitive sport.

Early responses to preliminary announcements concerning the inauguration of the Ohio Relays indicate a widespread interest in the meet. More than 120 schools, including 40 colleges and universities from most of the states of the Middle West, have manifested their interest in the meet so far.

Approximately $3,000 is being expended upon high-grade trophies for all events, prizes in keeping with the dignity that it is hoped will surround this meet.

The Ohio State University does not promise any reimbursement to competing teams this year, but does obligate itself to prorate any surplus over and above the actual operating expenses of the meet, including advertising, prizes, etc., prorating among the teams present to be based upon the number competing and distance traveled.

WOMEN'S SECTION

LYDIA CLARK, Ohio State University, Presiding

DANCING AND ITS PLACE IN THE CURRICULUM

MARGARET CHENEY
Ohio State University

Long ago the anthropologicals tells us, before man scratched rough outlines on the rocks, or spoke an articulate language, he

expressed himself through the dance. Having an instinctive sense of rhythm and his body at his command, it was only natural that he should dance. His dance—a spontaneous thing of wild gestures and crude movements had a vital place in life. Through it he told the story of his everyday life. During the course of time, however, and the progress of civilization we find the dance ceasing to be a spontaneous and sincere means of expression, and ceasing to play any vital part within his life. Due to a wrong interpretation of the meaning of life, to the belief that dancing was a purely physical thing—of the flesh only and hence to be despised—it very naturally fell into disrepute. Today it is used almost solely for amusement and too often with degrading appeals, it is little wonder that relatively few people will concede the possibility of its being worthy a place in an educational curriculum.

The layman is confronted by a confusing category. He reads of Currythenics, Denishawn, natural barefoot, Greek, Russian, and Oriental Dancing to say nothing of numerous other kinds. Consequently we must describe the particular type of dancing we propose to put in our schools.

For want of a better name the dancing we are trying to develop as an educational activity is called interpretative or rhythmic dancing and may be defined very simply as the art of self-expression through the medium of rhythmic bodily movement. It differs most radically from other forms of dancing, for no set dances are taught for the students to copy. It aims rather to develop the creative ability and power of self-expression of each individual, while the teacher acts as a guide giving helpful suggestions instead of as a model to be imitated.

Since the medium of expression in the dance is bodily movement, it is necessary that the student gain as perfect control of her body as possible so that she may use it free from inhibitions. Most of them begin with the spine and extend in well-ordered progression to the smaller muscle groups of the extremities. Besides increasing bodily control and flexibility the fundamental exercises serve the purpose of giving the students a knowledge of the complete range of movement possible in all the parts of

the body. With this added knowledge the student gains a larger vocabulary, as it were, with which to construct her dance.

As dancing is nearly always done to the accompaniment of music some time is spent in studying the simpler elements of its structure. An effort is made to get the student to listen more attentively to music so that as he becomes more sensitive to it he can execute his movements more readily.

When the student has arrived at a degree of bodily control at which she no longer has to concentrate upon her movements, or concentrate upon the music, and has attained a freedom of spirit she is ready to dance. Her dance being motivated by emotion and merely guided by the intellect becomes a spontaneous thing. Using only the best in music the instructor then endeavors to help and encourage the students in their individual expression of their reaction to the music, whether it be the expression of a thought aroused, an emotion or a word, or the working out of a problem to a particular composition.

Trusting that you have gained some idea of interpretive dancing by this brief description I should like to add a few words as to why we feel it is justified in having a place in an educational curriculum alongside of the other courses in physical education such as sports and gymnastics. Like them, it strives to develop better physical well being, finer posture, and a greater pride and respect for the marvelous mechanism of the human body. But besides these it has unique values of its own.

It is a cultural experience which gives it special significance today. The rush and scramble of our materialistic civilization with the jazz and cheap appeals that confront young people on every hand make a crying need for refining influences such as the dance has to offer.

We have only very lately come to realize the need of emotional education and in this the dance is a valuable instrument. By expressing her emotions through a healthful avenue such as the dance, the student gains both in self-knowledge and self-mastery. The dance, too, is an ideal recreative activity-recreative in the deepest sense of the word.

Lastly to many, dancing is a joyful experience and this in

itself seems sufficient reason to me for justifying its existence in our schools. Joy is a dynamic force in life and we need more and more of it. Nothing is more tragic to realize than that life becomes drab for so many of us, and that we grow leadened-eyed. I believe our children need to dream and dancing being a constructive sort of dreaming—I believe they need to dance.

For these and other various reasons and because we feel so strongly that "man's hunger and thirst for color and rhythm are as much simple facts of his nature as are his physical needs." We believe that dancing taught as an educational activity should find a place in all our schools.

SCHOOL LIBRARIANS

H. S. Hirshberg, Ohio State Library, Presiding

THE SCHOOL LIBRARIAN AND THE TEACHER

Estella M. Slaven
Ohio State University, Columbus

When Mr. Churchill of Oregon, in speaking before a sectional meeting of the National Education Association, made his frequently quoted statement to the effect that every high school of ten teachers should employ a full-time librarian, there was a slight stir in the audience.

Neither the thought nor the application of it was new to the speaker or to the audience. They saw in the new education a synthesizing process which, as it emphasized the pupil more and the subject less, was changing to some extent the function of the teacher and calling for the formation of a mass of materials for the pupil to use and thereby gain his experience. Upon the quality of this material, its availability, and its intelligent use in a proper environment would depend in a great measure the success of both pupil and teacher.

The project idea affected high schools as well as elementary schools, and it was evident that if there were to be purposeful activity on the part of the pupil, the original impulse must be given in the classroom. The activity could be continued in a special environment—the laboratory, shop, or library.

In the shop and laboratory the project method has long been practiced and the work is carried on under the eye of a teacher who, knowing the aim and scope of the project and the adequacy of the equipment, can determine what may be expected from the pupil. In the library the material is gathered, the tools prepared, and the activity supervised by a person who may or may not know the general and specific plans of the teacher, nor when or how these tools may be called into service.

Some students through impatience or helplessness lose the motivating purpose and the activity is carried on, if at all, as a

set of more or less spiritless movements. Here lies a difficulty. It is easy to discover and easy to remedy, if we teachers and librarians feel the seriousness of the loss to ourselves and to the pupil resulting from this break in the continuity of thought.

I often think of Dr. Jefferson's advice, "Never say, 'They won't cooperate;' say rather, 'They do not cooperate yet.' " That throws the burden upon the one who understands the necessity of team work. In this matter of carrying through plans originating in a classroom and brought to at least partial completion in a library the very closest union of interest is essential. To my mind the word "collaboration" describes better the work in which librarian and teacher engage.

If teaching is a fine art, as we like to think, why should not the two persons vitally interested in creating the right conditions for the finest kind of teaching wish to work out a method step by step as do other artists.

The librarian finds that she must know general educational theory, local classroom practice, and the general and specific plans of the teachers of each subject. She wants opportunities for classroom visits with chances to listen to recitations and hear assignments. She may be impelled to convince her principal that such contacts are vital, and to throw the responsibility for finding time, in some measure, upon his shoulders. The teacher, in turn, must find time to accompany his or her class to the library and to work as one of them in order to realize fully the conditions brought about by numbers working together with limited material in a social environment. From these visits arise plans for strengthening the collection, keeping the teacher informed of new publications, notifying the librarian in advance of class plans, and checking failures of students in reference work.

To whom does the librarian look for this collaboration, and to whom does she give her best efforts. The answer is simple—to every department in the school. The English teachers were perhaps the libraries' first and staunchest friends, but history and the other social studies soon claimed their place. Now we have the survey committee of the Mississippi Valley Historical Association insisting that there are certain fundamental values in the

study of history which cannot be attained without a large amount of collateral reading. The laboratory subjects are not confined to the laboratory. We find Earl R. Glenn of the Lincoln School of Columbia University, who has for years recommended library reading for science classes, collaborating with Miss Anne T. Eaton in working out an interesting scheme for chemistry readings.

And now we hear Mr. Bauersfeld, supervisor of technical work in the Chicago high schools, saying, "Head work as well as hand work seems to be the slogan now," and insisting that the ideal teacher provide manual training boys with plenty of books, so that they may learn the relation of their work to the processes of the industrial world. Fifty library books for collateral reading are now demanded in schools offering full courses in agriculture, and home-economics teachers besiege the library as they should for books, pictures, clippings, and charts illustrating lessons in nutrition, cooking, costume design, and interior decoration. We have not yet entered into that realm which the librarian would claim for her own, but which she must share with every person who would know the boys and girls they teach. This is the kingdom of what Mr. Wyer calls "real books," the books of beauty and power.

HOW THE JUNIOR HIGH LIBRARY DIFFERS FROM THAT OF THE SENIOR HIGH SCHOOL

Edna M. Hull
East Junior High School, Warren

The differences between the junior and senior high-school libraries result from the differences in organization and purpose of the two schools and from the fact that one is dealing with early and the other with later adolescents. The senior high-school library furnishes more advanced reference material, more mature supplementary reading and is more rigid in its organization. The junior high school aims to bridge the gap between the elementary school and the high school and in its effort to prepare the children

for the work which lies ahead, is more flexible in organization. Its library is used freely for browsing as well as for reference work, assists with material for club activities and seeks to furnish recreational reading for children of varying mental ability including foreign children with limited English vocabulary. The librarian teaches the lessons in the use of the library formerly taught in the high school and keeps teachers in touch with professional literature dealing with the junior high school and its various departments. She also cooperates with teachers and principal in the study of problem children and tries to help them with suitable reading.

HOW WE TEACH THE USE OF THE LIBRARY

Helen V. Lewis
Glenville High School Library, Cleveland

There is hardly a season in the year when some member of a group of school librarians does not remark that she is either beginning, finishing, or is in the midst of her library instruction. If just beginning, the remark is made courageously. If the speaker is in the thick of the fray, one may note the merest suspicion of weariness in her voice, but, if she has completed her appointed task, there is a gleam of triumph in her eye, which no one—but another school librarian—can quite appreciate.

Inevitably, the question is asked—"How much instruction do you give?" There is no need to ask the question—"How much instruction do you wish to give?" Each school librarian realizes her full responsibility toward the young people who are coming to her daily for books, material, advice, inspiration—and sometimes—consolation.

There are in Cleveland ten high schools, each with its library. Each of these high-school librarians has her own special and individual problems. Of these ten high schools, two are technical, two are commercial, and six are academic.

During the past year there has been a special effort to divide the library instruction between the school librarian and the Eng-

lish teacher. The chief reason for the change has been the recent rapid growth of all the high schools, and the corresponding increase in the enrollment in the freshman and sophomore classes. This seemed to be an opportune time for the English teacher to take over the lessons on the book, the dictionary, and the encyclopedia in connection with the prescribed course in English.

This departure has had the approval of Dr. Stratton, the director of English in the Cleveland public schools, therefore, last summer at his suggestion a committee of school librarians completed an outline giving a summary of the work to be covered in grades VII to XII, indicating the topics to be given by the librarian and by the teacher. The general plan is for the librarian to cover the classification, catalogue, and the general use of the library; and for the teacher to take up the book and its care, the use of the index, the dictionary, the encyclopedia, and a few other reference books. A copy of the outline was sent this fall to each school librarian, and also to the heads of the English departments.

As it is impossible to discuss in detail the instruction as given in all ten of the high schools, West High School of Commerce and Longwood High School of Commerce have been selected as representative examples.

The ideal arrangement as evidenced in the outline is for the instruction to be given throughout the four years, correlating it as nearly as possible with the subjects studied by the students. This has been done particularly with reference to that on the use of the *Reader's Guide,* which is given in connection with the debate work and with the making of bibliographies as class problems. Miss Coveney, in planning her work at West Commerce has carefully correlated her instruction which is carried through the entire four years. According to Miss Coveney's plan, five lessons, are given to the pupils of IX-B—three by the teacher and two by the librarian. As a result of these five lessons, the students are expected to distinguish carefully between the table of contents of a book and its index, and to turn instinctively to the back of the book in looking for material. They should have learned the general scope and arrangement of both the dictionary and the encyclopedia, should understand the importance of and reason

for the classification of books, and be able to use the catalogue readily and to find books on the shelves.

All other English sections at West Commerce are given one advanced lesson by the librarian in the library. The lessons in IX-A and X-B deal with these reference books which they will find most useful in connection with English and history work. The atlas, gazetteer, *Harper's Classical Dictionary,* and the *World Book* are discussed with the IX-A, and the lesson for the X-B takes up the *New Encyclopedia of Social Reform,* the *Century Cyclopedia of Names, Hoyt's Cyclopedia of Quotations, Who's Who*— and the *World Almanac.*

The pupils of X-A are instructed in the use of the *Reader's Guide.* In XI-B one lesson on the most important periodicals is given XI-A discusses newspapers and their use in a high school, and the XII-B is given special instruction on bibliography making and debating references. In the last lesson, given to XII-A, Miss Coveney discusses the library as a continuation school.

A test and problem are given to IX-B and a problem to each of the other classes. On the completion of his four years at West Commerce, each student should have a working knowledge of libraries and library tools and he equipped to use them.

In all of the schools a simplified, three-page outline of the course is given to each student to be studied and kept in his notebook for future reference. At West Commerce, each page is given out on the day preceding the lesson in which it will be discussed, in order that the work may be prepared.

At Longwood High School of Commerce a procedure is being worked out which is entirely different from that in use at the other schools. The auditorium at Longwood is large enough to seat only one-half of the students in the school, so that it is necessary to use two periods for auditorium exercises. These periods have been placed at the eighth hour on Mondays and Fridays, so that while one-half of the school is in the auditorium, the other half is in the home rooms. Each semester, six periods of this time will be given to library instruction which is to be carried on by the students themselves working in committees—after they have prepared the work under the supervision of the librarian. The real

problem is that of interesting the teacher in charge of the home room, and getting enough books on any one subject together, or persuading the teachers to appoint the committees early enough so that the work may be spread out over a week at least.

The topics are carefully subdivided, and each student is given a definite number of minutes in which to discuss his subject. The entire plan is in the first stages of development, and has some interesting possibilities.

One fact is taken into consideration in all of our library instruction work which need not be given so much attention in a smaller and less complicated system. There are in every entering class in a Cleveland high school, students who have had previous instruction in the use of the library and others who have not. This condition makes it impossible to assume any definite knowledge or background concerning the use of the library on the part of all, and makes necessary a certain amount of repetition—in order that all may be given the basic information.

In giving you the barest outline of the work covered in these schools, I have not touched upon one essential purpose of the instruction, which is, however, not limited to any one lesson. The teaching of the use of the library gives both the teacher and librarian an unusual opportunity to arouse in each student an appreciation of the library as a social institution, and a feeling of personal responsibility toward it as evidenced both in the care of books, and in his cooperation with other members of the class in the use of these books and other materials. This may be emphasized when the question of "Reserve Books" is discussed, as a great many tsudents must, of necessity, use books of which there are but few copies.

Miss Mary Hall, librarian of the Girls' High School Library in Brooklyn, has developed very completely the idea of "good citizenship by way of the library." In her articles in *Public Libraries* for January and February of this year, she tells of her lessons to the classes in Community Civics—a required subject for all freshmen in New York City high schools. The lesson is given in the library during the first or second week of the term, and no

pupil is permitted to borrow books from the school library until she has had it.

Library instruction may, therefore, serve not only to instruct our students in library technique, but to inculcate and develop in them a social consciousness and civic conscience.

SPECIAL EDUCATION

E. A. Doll, Ohio State University, Presiding

CHANGING STANDARDS IN SPECIAL EDUCATION

C. S. Berry
University of Michigan

Several significant changes have taken place in "special education" during the last ten or fifteen years. Some of these will be discussed briefly in this paper.

The term "special education" has been enlarged in meaning to include not only the education of the mentally retarded, but also the education of the delinquent, the unstable, the blind, the deaf, the cripple, anemic and tubercular, and those suffering from speech defects. In other words, the term has now come to include the education of all those children of compulsory school age who deviate from the typical child to such an extent that they cannot with justice to their own development and to the development of the typical child be educated wholly in the regular grades. This extension of the meaning of "special education" is shown in some of our large cities by the organization of departments of "special education" which are directly responsible for the education of all types of exceptional children.

Special education is becoming more and more to be a function of the local community and not merely of the state. The deaf, blind, feebleminded, and delinquent were at first educated, if educated at all, in state institutions, or in institutions privately owned but supported wholly or in part by the state. At the present time, day schools or classes for the deaf, blind, mentally retarded, and delinquent are found in all of our larger and more progressive cities and the movement is rapidly spreading to the smaller communities. Even heads of state institutions are active in advocating better facilities for the education of the special class child in the public schools.

In addition to providing special education for the blind, deaf, feeble-minded, and delinquent who have long been educated in

state institutions and schools, the local communities are now providing special education for the crippled, anemic and tubercular, delinquent, emotionally unstable, and for those suffering from defects of speech.

Along with the formation of special classes in the public schools for the various types of exceptional children, has developed a strong sentiment in favor of state aid for the education of these children in the home community. Many states now bear a large part of the expense of the education of the exceptional child in the local community. This is especially true of the blind, deaf, feeble-minded, and crippled.

The closer cooperation between state institutions for defective children and the normal schools and the colleges in the training of special class teachers augurs well for special education. It means not only better trained teachers, but also closer cooperation between the state institutions and the public schools in getting into the institution the type of child that belongs there and retaining in the public schools those who can be trained to take their place in society.

A change fraught with great significance for the future of this work is the increasing interest taken by welfare and civic organizations in the education of the handicapped child. The excellent work of the Rotary Clubs in advancing the education of the crippled is a case in point. These organizations are also rendering a real service in informing the public of the needs and possibilities of the handicapped child.

Possibly the most significant change of all is in the attitude of the people toward the handicapped. Long has the public regarded the education of the handicapped as a kind of charity; much in the same spirit as the passing stranger drops a dime in the hat of the blind beggar. But the people are now coming to see that these handicapped children are just as much entitled to the type of education that will enable them to make the most of their possibilities as is the normal child. That they cannot accomplish as much as their more fortunate brothers is due to no fault of theirs, but rather to society that has failed to remove the causes that make for the crippling of children in body or mind.

Closely related to this last change is the view that is now gaining ground that the great work of the future is in the field of prevention, the removal of the causes that make special education necessary.

The work of rehabilitation of maimed soldiers has not been without its influence on the education of the handicapped children of school age. It has brought to public attention the possibilities of training the handicapped, be they handicapped mentally or physically, in such a way as to make them in whole or in part self-supporting. More attention is now being given to the preparation of the handicapped to take their place in society than ever before. This is shown by the appointment of placement and following-up workers by the educational authorities and by the active efforts of welfare organizations in placing and assisting the handicapped upon leaving school to find a place in society, humble though it may be, that they can fill.

For long years teachers of the mentally retarded have clung tenaciously to the conventional course of study, merely devoting less time to the academic subjects and more time to motor training without much reference to the final outcomes. But with the emphasis shifting from the state institutions to the home community and with the recognition that the overwhelming majority of these subnormal children are destined to spend their lives in the community where educated, attention is now being directed to the type of learning that will really prepare them to take their place in society. No longer are we thinking of them as clerks and skilled artisans, but as a group that should be prepared to participate in the unskilled labor of the world. Since a large percentage of adults of normal intelligence are required to engage in unskilled labor, surely there can be no justification for attempting to prepare the two percent that stand lowest in intelligence for skilled labor. All the school can hope to do is to prepare these boys and girls through the formation of right habits and through the acquisition of the knowledge that will be constantly needed to take their place in the humblest occupations where they can be happy and useful.

As these changing conceptions develop more fully in the edu-

cation of the exceptional child, they will be not without influence in the education of the typical child, through the gradual removal of the causes that cripple the weak and impair the efficiency of the strong.

THE WIDER MEANING OF SPECIAL EDUCATION

William J. Ellis
Director, Division of Education and Classification,
New Jersey State Department of Institutions and Agencies

Special education is the leaven which has leavened the whole educational loaf. A review of the history of the development of the special-education movement discloses its importance for every phase of general education, with particular applications to primary and academic education and the modification of vocational and industrial education. Let us review briefly some of the contributions of special education to the whole field of general education and pedagogy.

The Importance of Discriminating Individuals on a Scientific Basis

Certainly the most distinguishing feature of recent educational progress has been the important place that educational and mental examinations have taken. One leading educator, at a National Educational Association meeting two years ago, gave this movement only one year more to live. Careful inquiry at the recent National Educational Association meeting in Chicago disclosed the fact that the measurement movement, far from diminishing, has, on the contrary, had a healthy, not to say luxuriant, growth in all parts of this country, and in every phase of its activity. The influence of special education on this movement can hardly be overestimated. The contributions of the research laboratories at some of our great state institutions for the care and training of the feebleminded are too well known to require repetition. Your own university is fortunate in having as its professor of clinical psychology, Dr. Henry Goddard, who, with his assistant, Dr.

Edgar Doll, has made most significant contributions to the scientific approach of the study of individual differences. This work initiated at the Vineland Training School and carried further by the public schools and public institutions throughout the country, was later taken up by the universities and in recent years by industry. Progressive school systems have begun to make careful scientific studies of the individuals in the school population, particularly those who are considered for assignment to the departments of special education. To special education must be attributed a large share of the credit for leading this movement.

The Necessity for Adapting the Curriculum to the Needs of the Individual

As a consequence of the strides made in the scientific study of individual differences, attention has been directed to the necessity for a comprehensive survey of the curriculum adapted to the children under training. Special education has approached this problem from a fresh viewpoint and with a firm grasp of the fundamental problems involved. Subject matter has been modified to meet the individual needs of the children. The analysis of the curriculum carried on from the standpoint of the capacities of the children to be trained, and the uses to which this training is put is in the nature of pioneer work in the field of education. Every new movement in education has had to struggle against the tendency toward formalizing and stereotyping the content of its curriculum. Special education, tied up so closely with the theorists and the scientific worker, has had a constant infusion of new thought and new method into the stream. Starting out with the purpose of teaching to the feeble-minded the primitive arts, and particularly hand work, weaving, basketry, raffia, and rug making, there developed the use of tools and wood working in a limited way, so that the curriculum became a kind of modified manual-training school. It is against this tendency toward formalizing the curriculum that special education must show special vigilance. The department of special education in the Detroit public schools to cite an outstanding example has gone far toward the analysis of the special abilities of the feeble-

minded for filling positions in the community. Here, in special classes with a department type of organization, there has grown up a new type of special education curriculum, adapted to the needs of the individuals under training and focused on the problem of social and industrial adjustment. Special education everywhere can profit from the work which has been carried forward under the direction of Dr. Charles S. Berry in Detroit, just as general education can profit by adopting this method of curriculum analysis.

Importance of Social Contacts and Industrial Contacts and Follow-up Activities

Just as special education has made its contributions to the problem of measurement, and particularly to the field of scientific study of individual differences and the revamping of the curriculum, so it has also pointed the way toward a broader appreciation of the responsibility of the school toward its community contacts. Surely no modern teacher in a department of special education, much less a responsible administrator, would be satisfied to let his duties stop at the classroom or the schoolhouse door. The problems of special education are essentially those of social and industrial adjustment. In many centers there have been developed the ways and means for meeting this responsibility. The social workers connected with school clinics have gone from the school into the homes of the children with a view to seeing that the good work accomplished in the schoolroom is not negatived by the conditions in the home and community life. Furthermore, special education has seen the necessity for a constant audit of its own work and has come to the point where it is ready to evaluate its own failures, as well as its successes. In this respect there is, of course, room for much improvement. The department of special education should be provided with ample facilities to conduct a follow-up service analogous in organization, and in some respects in purpose, to the type of supervision which the modern correctional institution gives to its parolees; for, after all, the real test of the efficacy of the work of

the department of special education is the success of these children after they have left the classroom.

Importance of Classification Within the Group

Special education has not stopped with the definition of feeble-mindedness as a convenient category or label for the 3 to 5 percent of the school population. At this point it has taken its cue from the scientific workers, particularly the psychologists and physicians, and has learned to discriminate between the types of feeble-minded. It is ready to recognize that even among the feeble-minded we have the verbal, the manual, and the social types, and that the treatment and training of these special types require special education and special methods if the educational program is to attain its full fruition. Furthermore, the extension of classification work among the feeble-minded has shown the necessity for taking into account the emotional and temperamental differences which are, in many cases, of fundamental significance. Here the department of special education finds particular help from the psychiatrist. Corrective measures through medical treatment and surgery, with a view to modifying incipient instability in school children, can be undertaken with every prospect of success.

Summary

What then is the wider meaning of special education? Those of us who have thought of special education as applied merely to the school training of the feeble-minded may well examine the fundamental principles which have motivated the work of the departments of special education in our educational systems. We find that these principles have application throughout the school population, and have indicated in broad general terms the next steps in public education. Fundamentally, the approach so clearly discernible in the history of special education is as follows:

> *First,* there is the necessity for a survey of the problem. Just as special education has used the psychological clinics and medical clinics for this purpose, so general education must look to the medical and psychological departments for a careful study of each school child, with a view to giving us the answer to the question, "Where is he?" Once this question is answered

we may attempt to determine our objectives. Special education in the more progressive cities has clearly defined these objectives, and has taken definite steps to attain them.

Second, general education will review this problem from the standpoint of how to arrive at the objective which has been set up for the individual child. Surely it is possible, even in our great public schools, to give each child an opportunity for that self-expression which is essential to his fullest development, and at the same time to teach the irreducible minimum of educational fundamentals, which no public-school administrator can neglect, and which no wise educational program would ignore. It may, therefore, be the mission of the leaders in special education in their respective communities to show, both by example and precept, the application and the wider meaning of special education for the school system as a whole. If each teacher and each principal in a department of special education will make this a conscious objective, he can greatly influence the course of general education in his school system.

SOCIAL OBJECTIVES FOR SUBNORMALS

E. R. Johnstone
Director, Training School, Vineland, New Jersey

We must first recognize the subnormals. This means observation, classification, and scientific study.

Knowing them for what they are we must realize that the best of training will still leave them in the lower levels of social life.

Realizing their retarded mental development, their difficulty in learning and the shortness of their life span we must teach them only the things they can understand and make use of when they become men and women in years. This must be done in the most direct manner.

For those who have delinquent tendencies, special attention must be given to prepare them to use their leisure time wisely.

Classification

For the purposes of this paper we shall consider as subnormals those who are actually feeble-minded, especially the high-grade imbeciles and morons, as well as those who are dull normals or backward. Nobody knows their numbers. For the feeble-minded, most conservative students accept estimates varying from

one in five hundred to one in three hundred in the general population. We do not know that there is scarcely a primary class in the country without its laggard, two, three, four years behind his grade. Every community has its "tail-enders" who are always public charges or become so with every downward economic move, yes, even with the coming of a snowstorm or freezing weather.

This class must not be looked upon as lazy. They are inefficient. They *do* fatigue easily. They *are* unable to plan wisely. They *do* follow the lines of least resistance. In most instances they are a class apart from the virile, energetic, ambitious citizen. Community studies and inheritance investigations show to a large degree that they mate with others of their own mental and social level. They breed true to form.

The United States Government's survey of conscripted men showed ten percent with a mental age of ten. Whether or not you agree with the accuracy of these figures, they point significantly toward the subnormals. Studies in temperament show that we must recognize instability and mal-adjustment among this class. Recognition of the types of mentality, namely verbal, manual and social, develops the fact that frequently they are being taught unwisely with consequent indifference and irritating results: round pegs in square holes. Offhand, intelligent people know them as slow, dull, backward, and retarded.

In my own New Jersey, we have been transferring a comparatively large number of defective children from the reformatory institutions to the institutions for the feeble-minded. We realize that a new classification must be made. The dependent subnormal we have had with us for many years. They are quite different from the delinquent subnormals, who present new problems and give us new situations to meet. I know we have long talked of defective delinquents. We must differentiate them from delinquent defectives.

Scientific methods of testing, in the hands of scientists are giving, and will continue to give, indisputable facts concerning individuals. There must be no cessation of this work. In the words of the business man, we must take an inventory. The Ohio

Bureau of Juvenile Research is the best thing of its kind in America. Use it to its greatest capacity.

A survey of what actually becomes of the normal children who leave school before entering high school will show the need of greatly modifying courses of study with much greater emphasis to be laid upon manual and social studies and less on verbal or so-called intellectual branches.

Objectives

For the "plain" feeble-minded we have preached permanent custodial care for thirty years. We have increased the size and number of our institutions. Sanitation, better housing facilities, and the spread of general charitable ideals have kept alive many who would have been literally crowded out of life.

For those "plain" subnormals who do *not* come from defective stock we must provide training in habits of industry and good behavior. We must realize the difference between self-direction and self-support. They are not capable of self-direction. They may become self-supporting, if their condition is understood, and if they are given an "industrial opportunity." This means suitable work must be found for them; the job must be explained and taught; and supervision must be provided. The product must be marketed by someone else. You must expect from the subnormal worker only that he shall do the task immediately before him. Supervision must be provided always. And it must be realized that his value is only his efficiency *minus* the cost of supervision.

Training for those children should follow the lines of the industries of that locality; farming in an agricultural section, mill work in a mill district; and caring for lawns, doing housework, washing windows in a residential section. Contacts must be made with prospective employers and, if at all possible, part-time school and part-time work should be organized.

For these subnormals who *are* from defective stock, permanent custodial care must be provided, unless they are to be sterilized. The American Eugenics Association at Cold Springs Harbor, New York, has prepared a model sterilization law. I

commend it to your favorable consideration. Life in an institution is ideal for one of defective stock. Here he has wise supervision, suitable occupation, plenty of healthy and moral recreation, good food, proper clothing, prompt medical attention, the companionship of his peers, and such preparation for the life to come as he is able to comprehend.

Outside an institution even the harmless subnormal finds but little of real life. Some get along apparently well and happily. Most of them are more or less conscious of their inferiority. The busy world has no time or patience with them. They lose jobs, become tramps, follow the first red flag, and become the prey of the evil-minded. Inside, they have a real place in a simple environment. They even get on the stage—the only stage in the world that is safe for a subnormal girl—they show off their simple accomplishments to a simple audience; and they are appreciated instead of being belittled. They, who outside must always be the followers, the drudges, the abused, become on the inside the leaders, and in this leadership they hold up their heads and walk erect.

Outside, those who go to regular school drag behind their mates. They are the big hulking bodies in seats meant for little children. They take three or four times their share of the time of the teacher. Even then they learn habits of idleness because with thirty other children the teacher still must neglect them. They practice and teach immorality. When at last the patience of the teachers is exhausted or when the school law so ordains they are turned out to become the drifters and the delinquents.

Our thought for the delinquent subnormals on the outside has been mainly for their delinquencies. They commit a crime—we pay the bill—and we arrest them, paying for the police. They are placed on probation, we pay the officer. Being subnormal they again do wrong—we rearrest them. They are tried and convicted and placed in an institution for delinquents—we are still paying the bills. We try to reform them and after a time turn them out and because they are too stupid to be reformed they again start around the vicious circle. Remember you pay the bills. Stupid, is it not? In the special classes they learn habits

of industry and good behavior, after they pass through the special classes our objective should be to place them in suitable institutions. Inside the institutions they learn the simple elements of the trades. They become excellent helpers for carpenter, mason, plumber, painter, and tailor, or dressmaker. They make shoes, launder clothes, make bricks and cement blocks. They care for cattle, hogs, horses, and poultry. They drive teams and do much farming, but it is all under guidance near at hand. A kindly word, a piece of candy, a "good O. K," a promise never broken will bring the best they have. But the wise teacher never calls for the thing beyond their physical or mental or moral strength. And *he never requires them to sustain even a little responsibility to the breaking point.* That is the difference between inside and outside.

Let us not indulge in any maudlin sympathy for the subnormal girl or boy who spends his life in a good institution. It is a paradise compared to life in the slums and brothels, in the broken down borders of a village, or in a field of labor that takes the last ounce of unfed strength to keep body and soul together. One great ideal and practical objective for the upper thirty percent (intelligent citizens) is to give direction, protection and control to the lowest thirty percent. And that means "Happiness" for each one of them, the greatest objective.

If you carry the thought of objectives up to the normals it is at once evident that the schooling of the future must omit much non-essential book work and fit the pupils to be the clerks, mechanics, farmers, and small business men and women that they actually *do* become.

Procedure

There should be medical and psychological examination—psychiatric when indicated of all school children at least up to the fifth grade. This should pick out all who suffer from remedial conditions; bad teeth, tonsils and adenoids; faulty sight and hearing; undernourishment, incipient tuberculosis, unsanitary bodies. It should also select those who are fundamentally retarded or unstable; incidentally it will give leads as to the kind of training

that is indicated for normal children of different types of intelligence.

Proper examination should lead to proper classification. Every community should have its own central record office and the record should follow the child for his better understanding and treatment. This is an individual matter as distinguished from group classifications.

Special classes should be established as rapidly as they are indicated in order that every child may have whatever it most needs to make it as efficient as possible and particularly to give it the highest degree of happiness.

For those who should not grow up in the community, arrangements must be made to transfer directly from the special class to the institution for permanent custody. This is particularly needed for those whom we have called delinquent-subnormals.

The reformatory and penal institutions must establish and maintain departments for the subnormal, differently managed and without the object of parole; until such time as special institutions for defective delinquents are established.

Training for subnormals whether in special classes or in institutions must be simple and direct. English work need only cover the elementary part of the four fundamentals, simple reading and spelling, history and geography as stories, no grammar. A great deal of parrot-like repetition is frequently mistaken for understanding. A study of the limitations of subnormals will throw much light upon the burden borne by normal children in the primary grades. None of the subnormals ever hold "white collar" jobs.

Kindergarten occupations must go into simple industrial work, for those who remain in institutions. Those who may go out become errand boys, porters, assistant janitors, and unskilled mill and factory workers. They need training in keeping a job and accuracy in little things. The girls can work at millinery, dressmaking, and housework. Train them in needlework and neatness. In other words the subnormals are by nature the hewers of wood and the drawers of water and should be trained accordingly and once their condition is determined there should

be no further waste of time, energy, and nerve force trying to take them above their level, because they have pretty faces or because someone "doesn't believe in tests."

In dealing with subnormals we learn lessons that help in the training and treatment of normals:

We must say exactly what we mean if we wish to be properly understood.
Scolding or fault-finding takes away energy from the recipient.
Praise increases energy.
Enlarged ego, commonly called swelled head, usually means that a child really believes it can do something it has never yet accomplished. Give it a chance.
The presence of an adult usually gives pleasure or discomfort to a child. Which do you carry?
The tone of your voice gives pain or comfort.
Some teachers would rather have obedience than happiness.
All the world craves a sympathetic listener.
With "Happiness" first, all else follows.

Summary

Classification is necessary to understand the actual conditions of each subnormal child. This must include intelligence, physical conditions, and behavior. The successful trainer must set an objective for the child for each day's lesson, for the year, for its after-school days. This may be outside an institution for those who are not from defective stock. Those who come from defective stock should have permanent custody.

All training must actually be from the simple to the complex, from the known to the unknown, and from the concrete to the abstract. Many teachers of subnormals never make their lessons quite simple enough, they do not start with things their children surely know, and they think a thing is concrete to a child just because it has a name.

Cheerfulness and understanding are essential to the development of subnormals. Practically everything that has been said for subnormals applies to normals.

TEACHER TRAINING

T. C. McCracken, Ohio University, Presiding

SUPPLY AND DEMAND IN TEACHER TRAINING

B. R. Buckingham
Bureau of Educational Research, Ohio State University

By devoting attention closely enough to a single feature of school work, one may easily become convinced of its overwhelming importance. It may easily appear to be the condition upon which everything else depends. Writers on educational topics have at one time and another thus overemphasized various aspects of school procedure. One would have us believe that financial support is the fundamental requisite; another that the physical condition of the children is a *sine qua non;* and a third that supervision is the determining factor. If the question of priority among the conditions contributing to school efficiency is worth raising—if it is more than the fabled quarrel between the hand, the eye, and the stomach, each claiming to be the most important member of the body—first place must undoubtedly be assigned to the teacher.

"A nation," says Thorndike, "which lets incapables teach it, while the capable men and women only feed or clothe or amuse it, is committing intellectual suicide." The modern demands of society and of civilization require an everlengthening and intensive period of training for children and young people. Longer and longer grows the period of infancy—the period of dependence of the human child upon adult guidance. Of supreme importance, therefore, it is that there be at the service of society as the teachers of its dependents, men and women of first-rate intellect, morals, and skill. What, then, is being done to provide teachers of "first-rate intellect, morals, and skill" to the schools of this commonwealth?

With the cooperation of the Ohio State Department of Education, and under a grant from the Commonwealth Fund, the Bureau of Educational Research of Ohio State University will

seek part of the answer to this question during the ensuing year. Those who believe the answer is important—and scarcely an educational official can believe otherwise—will no doubt be eager to cooperate in securing the necessary fundamental data.

We shall seek to find out the number of teachers who in accordance with the certification laws of the state are annually made available to the public schools. These teachers we shall regard as "trained" without reference to their individual ability. We shall especially concern ourselves with teachers whose right to be regarded as professionally trained is based upon graduation from an institution supported or approved by the state for teacher-training purposes.

It will be the purpose of the study which we are about to make to indicate numerically on the one hand the requirements of the public-school system of Ohio, and on the other hand the extent to which these requirements are being met.

Many detailed problems group themselves under this general problem—such problems as the length of tenure of teachers, the number who come from other states, the number trained in each type of Ohio institution, the number who after being trained in these institutions serve in Ohio, the geographical distribution of those who become teachers, and the extent to which the graduates of teacher-training institutions tend to become teachers in the subjects and in the types of work for which they were specially trained. Data will also be offered concerning the salaries paid to new appointees in each line of work and in different parts of the state—questions of vital significance in relation to the supply of teachers for the schools.

In conducting this investigation certain assumptions will be made relative to the State's teacher-training enterprise. First, it is fair to assume that the state has an interest, if not a right, in regard to the service of the students who are trained at state expense. This statement, of course, refers only to the tax-supported institutions at which students are trained without charge for tuition or at a nominal charge. Second, the graduate of the teacher-training school likewise has rights, rights to employment and to conditions of work which do not compare un-

favorably with those of other states. It is idle for the state to set up its claim to the service of its prospective teachers unless it makes known to them the existence of positions corresponding to their training. It is likewise idle for the state to assert its claims unless it runs a good system of public schools.

Third, another assumption which will be implicit in the investigation which we are about to conduct is that there is an obligation upon the state to provide a sufficient number of trained teachers to operate its public schools. In the actual procedure consequent upon this assumption, account will, of course, be taken of the total resources of the state, including those which are derived from the privately endowed colleges and universities.

In general the state should aim to train as many teachers as it needs and no more. If it trains fewer than it needs it contents itself with a certain number of untrained teachers or draws upon other states—states, be it observed, which have rights of their own. If it trains more than it needs it not only incurs unnecessary expenses, but it depresses salaries in a calling which is already notoriously under-paid. This is precisely what has happened in some lines of teaching. There is an oversupply and consequently a low salary.

It is clear from what has been said that the investigation to which we are committing ourselves will have occasion repeatedly to consider the flow of students and of teachers from one state to another. If these questions get us into difficulty, as they undoubtedly will, the difficulty is one that inheres in the American system of state-controlled education. No movement in the administration of the public schools of the country is more evident historically than the movement to increase the unit of organization and control. We depreciate the weak school district system and commend the township system as a better one because it places greater resources at the disposal of the schools and equalizes taxation burdens. The county as a unit obtains even greater sanction, while in the development of educational thought in the last quarter of a century, the conception of the state as the unifying influence has come prominently forward. The question is now at issue whether this is the final stop or not. In the matter

of the provision of teachers in relation to the demand for them, we find one of the most convincing arguments for enlarging our conception of education still further and for putting it on a national basis. Our investigation, however, will not enter into this question. It will take the facts as they are, attempt to state them with clearness and to make certain suggestions where remedies seem to be possible.

THE PLAN OF COOPERATION BETWEEN THE BOARD OF EDUCATION OF ATHENS AND THE OHIO UNIVERSITY FOR OBSERVATION AND PRACTICE TEACHING

A. F. Myers
Ohio University, Athens, Ohio

One of the biggest problems confronting the teacher-training institutions of the country is that of securing adequate demonstration and practice facilities. The shortage of practice facilities has resulted from two major causes: (1) Great increase in attendance at teacher-training institutions, due to insistence upon more professional training for teachers. (2) Increased emphasis upon observation and practice-teaching in the training of the teacher. These two factors together have resulted in badly overcrowded practice facilities in nearly all of our teacher-training institutions. Just how bad this situation is very few people know.

It is quite common today to find situations like the one cited below in many of our teacher-training institutions and they have been found in Ohio within the past year. A critic teacher is responsible for the instruction of from forty to fifty children in a room, responsible for the supervision of thirty practice-teachers all of whom teach in her room every day, and responsible for the teaching of demonstration lessons in any subject taught in her grade upon one day's notice. Such conditions as these have developed in our training schools within the last ten years.

In 1912-13 there were fifty-two practice-teachers in the Training School at Ohio University. There were seven critic teachers

at that time. In 1922-23 there were one hundred and forty practice-teachers and eight critic teachers. The facilities in 1912-13 compared quite favorably with the standards set up by Judd and others. According to their standards there should not be more than eight practice-teachers per critic teacher and not more than half of the teaching should be done by practice-teachers. It would have been necessary for us to have had twenty-one critic teachers in 1922-23, if we had hoped to have facilities that were comparable with those in 1912-13.

I have visited some good state teacher-training schools within the past two years. We all seem to be in the same predicament with reference to practice facilities. I should say that the most hopeful aspect of the situation is the universal recognition of the seriousness of the problem.

State teacher-training institutions are attempting to provide adequate practice and demonstration facilities in various ways. Some are attempting to build up independent facilities located on or close to the campus. Many serious administrative problems are avoided in this way. I do not consider this solution entirely satisfactory, however, for: (1) The expense makes it almost prohibitive. (2) It is very difficult to approximate normal public-school conditions. (3) It is difficult to get enough children, particularly in the smaller communities, where many of the state teacher-training institutions are located.

Another plan that is just the opposite of the one described above is found in some institutions. Under this plan the teacher-training institution places its practice-teaching program almost entirely in the hands of the local board of education and the superintendent of schools. Critic teachers are selected from the local corps of teachers by the superintendent. The teacher-training institution pays them for their additional duties as critic teachers. This management usually comes as a result of necessity rather than choice. Many teacher-training institutions have found themselves denied practice facilities, except under such a one-sided management as that, by small communities which would have little cause for existence if the institutions were not located there. This situation exists because of a number of causes among which

might be listed: (1) the old "town-gown" strife; (2) fear that the public schools may be swallowed up by the teacher-training institution; (3) dislike to have children practiced on.

From the standpoint of the teacher-training institution, I think this plan is entirely bad. If it is our idea that the purpose of practice-teaching is merely to give the student a chance to "try her hand" at teaching before she goes out to tackle a real job, then this plan will probably do as well as any other. The teacher will probably get nothing of value to herself from a practice-teaching course under this kind of arrangement that she would not get in her first two months of experience in her first position.

Another plan that has a great many points in its favor is that of turning over the entire school system in a small community or certain schools in a large community to the teacher-training institution. Under this plan the teacher-training institution assumes full responsibility for the operation of the local school system. The funds available from the community for the operation of the schools are supplemented by the institution. Under this plan the community should secure a better educational program than it could provide by itself. Such a plan is not feasible, however, unless the community has abundant confidence in the ability and good intentions of the teacher-training institution. Communities do not usually have such confidence. In many cases they are undoubtedly right.

At Ohio University a plan has been worked out which places the entire city school system of Athens at the disposal of the university for its practice-teaching program without taking the control of the city schools entirely out of the hands of the local board of education and the superintendent of schools. The plan is in the form of an agreement between Ohio University and the Board of Education of Athens. The essential provisions of the agreement are as follows:

1. The board of education agrees to permit the university to do practice-teaching in as many of the rooms of the Athens schools as the university deems necessary for its practice-teaching program.
2. Teachers already in the employ of the board of education may be employed as critic teachers by the university subject

to the approval of the superintendent of schools and the board of education.

3. As vacancies occur in the corps of city teachers the university may nominate critic teachers to fill these vacancies. The board of education is not under obligation to employ teachers nominated by the university nor to create vacancies for the convenience of the university.
4. The board of education agrees to pay its maximum salary to all teachers used by the university as critic teachers.
5. The university agrees to supplement the salaries of all teachers in the city schools employed by the university as critic teachers. (It may be added that it will also be the policy of the university to supplement the salaries of principals of schools where practice-teaching is done.)
6. Not more than fifty percent of the teaching in rooms used for practice-teaching is to be done by practice-teachers.
7. The employment of principals in schools where practice-teaching is done or of a superintendent of schools is to be subject to the approval of the university.
8. The university agrees to employ a director of teacher training who shall have charge of the instruction and the materials of instruction in those parts of the school system used by the university for practice-teaching and for the direction of the practice-teaching program.
9. The employment of a director of teacher training is subject to the approval of the board of education.
10. The board of education agrees to supply the equipment and instructional supplies in that part of the city school system used by the university for practice-teaching. The agreement on this point was later supplemented to provide that the board of education would purchase instructional supplies in rooms where practice-teaching was done equal in amount to its expenditure for instructional supplies in rooms of the same grade where practice-teaching was not done. When additional supplies are desired the university is to purchase them.
11. The superintendent of schools and the director of teacher training are to act together in the selection of instructional supplies, the formation of courses of study and the assignment of pupils. All other matters of administration are in the hands of the superintendent of schools.
12. The elementary training schools, which is located across the street from the campus, and is owned by the university, is to be maintained entirely by the university. The salaries of critic teachers in this school are to be paid entirely by the university.
13. All critic teachers are considered members of the corps of city teachers and as such are subject to the rules and regulations of the board of education for city teachers.
14. All members of the teaching corps of the city where salaries are supplemented by the university are considered members of the faculty of the College of Education of Ohio University.
15. The university agrees to discontinue John Hancock High School (the university high school) as soon as the new city high-school building is completed.

16. The board of education may require the director of teacher training to attend any or all of its meetings.
17. The university may call the superintendent of schools for a conference whenever necessary.
18. Either party may discontinue plan by giving notice in writ- to the other party not later than September First of its intention to do so on June First of the following year.

Our plan is new with us. It was inaugurated at the beginning of the present school year. Prior to that time all of the elementary practice-teaching was done in the elementary training school with a principal and eight critic teachers. These facilities were hopelessly inadequate. Practically all the teaching was done by practice-teachers. All of the high-school practice-teaching was done in John Hancock High School which is located on the top floor of one of the university buildings. It would have required an expenditure of at least $500,000 to provide housing and equipment for an adequate practice-teaching program for Ohio University. The cost of maintenance and of critic teachers' salaries would have been several times the cost under the plan described above.

I believe the present plan has the following points to commend it:

1. The training school, located near the campus and maintained entirely by the university, provides facilities for observation, participation, preliminary practice-teaching, and limited experimentation. Here is provided that close contact between theory and practice.
2. Ample facilities are provided in the city schools for responsible practice-teaching under normal public-school conditions and under the supervision of expert critic teachers. The student will have an opportunity to teach classes of thirty-five or forty children for entire half-day sessions.
3. The interests of the children are protected through the limitation on the amount of practice-teaching. No critic teacher in the city system has more than four practice-teachers assigned to her.
4. The community gains through getting better teachers and better equipment.
5. The cost is not prohibitive.
6. It is a plan that the community can and does endorse.

WAYS OF DEVELOPING INITIATIVE IN THE STUDENT TEACHER

A. L. Suhrie
Cleveland School of Education, Cleveland

The complaint voiced by some within and others without the school that our students are lacking in initiative, the aptitude or tendency to "start something," has no basis in fact for the large majority.

When the native urge to "start something" is lacking it is due to low physical or mental vitality. The remedy for the former is the adoption by the student of that regime which will make her physically fit. Those in poor mental health usually suffer from some sort of "inferiority complex" or lack of self-confidence in place of which there must be substituted a feeling of self-reliance by getting the student in his thought to dwell upon some things he has achieved and by setting him tasks that he can succeed in doing.

In the case of the great majority of our students a fair degree of initiative exists though it may not always be in evidence because it is being directed toward ends we know not of. With these our problem in the school, therefore, is not how to *develop* but how to *direct* initiative in the student.

For purposes of more accurately defining and attacking our problem the process of directing the student's initiative may be thought of as comprising four steps or phases:

First, there must be set up in the mind of the student an end, a purpose, an objective, a felt need toward which his tendency to initiate may be directed. The number and variety of objectives presented to our students and the relative appeal of each is determined very largely by the program or lack of program of the school.

Second, the student must gather every possible idea and suggestion as to ways and means of achieving this goal. The amount and variety of experience which the individual has had in the general field of the activity will determine the number and worth of the ideas, devices, etc., suggested. Hence it is important that we provide our students with as many contacts and as great a variety of experiences as it is possible for the school to furnish. Further we should cease discussion of initiative as though it were some sort of faculty or entity within us that may

be trained or developed without regard to the situation in which it is to be applied.

Third, there must be a critical evaluation of the various ways and means that have suggested themselves with a final choice of those which are judged best adapted to achieve the end in view. Proper evaluation and right choices can be made only provided the educational institution furnishes a comprehensive program whose purpose it is to help the student make the evaluation and choice.

Fourth, the guidance or direction of initiative consists in the actual performance of the plan devised or scheme chosen. The three preceding steps having been well taken, that student who is physically and mentally fit will proceed almost automatically to the actual execution of the plan selected.

Proper provision for training in these four phases of the direction of initiative may be furnished by the school through installing features involving student-faculty cooperation for its total program. The students may participate in the administration of the various activities of the school through a representative legislative senate to such a degree that it is possible for the entire faculty to absent themselves for a day or two at any time without derangement of the day's work. Joint student-faculty committees may be appointed who will be concerned with the curriculum, scholarship and student standing, social affairs, etc., to whom will be referred all pertinent questions and whose recommendations will go into effect only when approved by both faculty and student senate. There may be joint student-faculty responsibility for providing a daily assembly program presented before the entire student body, three or four of which each week are furnished by the students themselves. Student and faculty may cooperate in arrangements for public performances, sales, etc., having as their object the provision of funds for the support of various school activities, school and class parties, class and group luncheons scheduled as a regular part of each day's roster, student publications, the dramatic club, folk-dancing club, nature club, geography club, etc., all tend to bring students and faculty into close relation. Group projects and studies of such topics as the racial distribution of Cleveland's school population are advisable. For the student preparing to teach, frequent contact from the very beginning of her course in demonstrations, "participations" and

practice-teaching with the multiform teaching situations and problems that are going to confront her in life-size a short two or four years later, are interesting as well as instructive. Throughout all there should be that spirit of comradeship between the less experienced student and the more experienced instructor which insures the adoption of worthier objectives, a more complete consideration of possible ways and means, and a wiser final choice of the plan to be followed than is possible without such a spirit of mutual interest and sympathy.

STATE SYSTEM OF CERTIFICATION OF TEACHERS

T. E. Finegan
Washington, D. C.

There has been no phase of my experience in public-school work which has been more interesting and attractive than that part of it which has related to the training of teachers. The great potential factor in the public school is the teacher. While the school building and its equipment are important considerations, they do not insure a good school; but a well-trained teacher, one who is resourceful, who loves children, who has imagination and vision, and who possesses real spiritual power, will insure a good school regardless of the inadequacy of the building or the equipment.

The history of this phase of public-school administration is full of interest and inspiration. As soon as public schools were established in this country, men and women appeared who had the vision to see the need for institutions in which teachers should be trained. Two schools of thought arose in this country as to the type of institution which should be established for this work.

In the state of New York the board of regents had been created and was developing academies and colleges. Many of the academies were organized in the latter part of the eighteenth century and the early part of the nineteenth century. These academies had powerful friends in the legislature. In the development of agencies for the training of teachers the regents and the friends

of the academies were alert to obtain state aid for the organization of institutions within the academies which should train prospective teachers. Teacher classes or teacher-training classes were organized.

The appropriations for this work were under the control of the regents and were apportioned by that body to the academies. The argument that the state should utilize existing institutions for this work as a matter of economy, instead of establishing separate institutions, was plausible and effective. The academies were organized to provide regular academic instruction and did little else. The training of teachers was a matter of secondary importance.

The funds obtained from the state for that work gave material support to these academies, and although vigorous contest was waged, the regents and the academies won. The result was the establishment of the New York system of teacher-training classes which is still in operation, and the handicap resulting from that action is felt in New York today.

The great leaders in Massachusetts had the vision to see the importance of building state institutions which should be charged with the duty and obligation of training teachers. The road was not easy in Massachusetts, but the leaders in the development of her public-school system won for her the distinction of establishing the first normal school in America. New York followed in the trail of Massachusetts and also established normal schools; although she still clung to her system of local training classes. In this way the state normal school and the local training or normal school were established. The local normal schools will be considered later.

State normal schools were for many years confronted with stubborn opposition. The friends of these institutions fought for half a century before they succeeded in getting such institutions established upon a firm foundation. It was not until after the Civil War that Dr. Sheldon of Oswego compelled the general recognition of these institutions by doing work which commanded the respect and support of the leading educators of the country.

Within the last quarter of a century the college of education

in many leading universities has been developed and these institutions are training large numbers of teachers and supervising officers. There has also arisen the city training school or the teachers' city college, which trains teachers for the city supporting the school or college. We may, therefore, confidently expect that for many years to come the state normal schools, the colleges of education, and the city teachers' colleges will supply the teachers for the public schools of America.

I should like to know something of the makeup of the audience which I am addressing and what your interest in this field may be. How many of you represent state training institutions? How many represent county normal schools? How many city institutions? I shall regard city training schools as equivalent to state normal schools, since they are organized and administered on a professional basis the same as that of the normal schools.

There are some of you who are not going to agree with the opinions which I shall express upon questions involved in the treatment of this subject. I am here, however, to speak out of my own experience and to express the judgments which I have formed on that experience. I shall, therefore, discuss briefly the local or county normal school.

These county normal schools and the teacher-training classes of New York are substitutes or apologies for real training institutions. I was for a long time associated with these institutions in New York; they were under my direct supervision for many years. I have something of an affection for them and an appreciation of the great service which they rendered to public education. I am just as conscious, however, of the larger service which normal schools might have rendered had the several states devoted all their energy and money to the development of state normal schools sufficient to supply the schools of the state with trained teachers. The state which continues to support these local training institutions instead of establishing state normal schools adequate to supply the annual turnover in its teaching force is compromising on one of the most vital features of its school work and is failing to discharge its solemn obligation to its children. In my judgment, there is no problem in public-

school administration upon which the leaders of the country should unite in a national campaign that is of more importance to educational interests than the establishment of a number of state normal schools adequate to provide a trained teacher for every classroom in the country.

But what is the specific function of a state normal school? As I see this problem, the function of these schools at the present time is very largely that of training teachers for the elementary schools. I am not saying that such institutions should devote themselves exclusively to the training of elementary teachers. The pressing need for trained teachers in the elementary schools places a tremendous burden upon our normal schools. If these schools can supply trained teachers for our elementary public schools, they will render the nation a mighty service. Those who are leaders in education in every state of the union should therefore organize a program to hold the normal schools responsible for training an adequate number of elementary teachers for the schools of the state.

The departments of education in colleges and universities are generally better equipped for training teachers for secondary schools and for supervisory positions in general than are the normal schools. They should not be charged, however, with the permanent obligation of training all the secondary teachers of the country. It will be better for the public schools if state normal schools which are equipped for such service train some of the high-school teachers. Normal schools which are equipped to train high-school teachers should therefore do that work as well as the training of teachers for elementary schools. As the number of these schools increase and as the burden of supplying elementary teachers is decreased, they should be equipped to train secondary as well as elementary teachers. In short, the future program of teacher training should contemplate that state normal schools and colleges of education shall train secondary as well as elementary teachers.

I should like to visualize briefly a state system of normal schools and the functions which they should perform. The work of these institutions is embarrassed and very much hampered

by errors of judgment and the lack of a general state plan when such schools were organized. These conditions should be corrected. Dr. Suhrie has told you this morning the plan by which state normal schools were located in Pennsylvania. The same plan—or rather lack of a plan—prevailed in the organization of the New York schools and those of other states.

Each state should, therefore, work out a plan for the gradual relocation of these schools. This may best be done in connection with a program for the erection of additional normal schools, but even then it will be a difficult task. The first step in a program of this nature is to educate the people to an appreciation of the value and need of trained teachers. There is no greater obligation resting upon a state in connection with its educational program than to make adequate provision for supplying trained teachers for every classroom in the state. I do not know what the facts may be in Ohio, but I do know that in New York, Pennsylvania, and several other states, seventy-five percent of the students in state normal schools come from within a radius of fifty miles. I should be surprised if this were not the case in Ohio. So the question of the location of normal schools is an important one.

A state should be properly divided into normal-school districts. The topography of the country, the trunk lines of improved highways, the electric lines and railroad facilities, and the population should be taken into consideration in forming these districts. Modern buildings and equipment, adequate dormitory facilities, and abundant space in grounds should be provided. The school maintained in each of these districts should be a demonstration center, a laboratory, for all the public schools of that district.

A practice school should be under the direction and control of the normal school. The regular public-school system of a city or borough should be used as a practice department. This practice school should be organized on the most efficient and economical basis possible. It should contain a modern system of health instruction, including physical education and medical inspection; an open-air school should also be maintained. A modern, sane system of tests and measurements should be provided with types

of special education. Adequate library and laboratory facilities should be afforded and vocational instruction including home economics and agriculture given. Here the work of a modern school should be maintained in a thoroughly scientific and professional manner. Here, conferences of teachers and school officers should be held and here any teacher in the district should come for assistance with the problems which are troubling him.

While this physical equipment is important and even imperative, it is of greater importance that teachers of the finest qualifications shall be provided. When a vacancy occurs in the faculty of a state normal school, the principal of that school should be able to go out and employ the ablest teacher he can find. We are not doing that now. In many schools the strongest member of the faculty is lost to a city because the city pays a more adequate salary. Larger salaries must, therefore, be paid and better treatment generally accorded these teachers. Where are the normal schools that are following the practice of the colleges and allowing their faculty the sabbatical year? The members of these faculties need the same period of mental recuperation and growth that are given to members of college faculties; they need the same cultural and intellectual contacts that the sabbatical year affords.

As to overwork, I visited five normal schools in one week and found that on the average teachers were carrying a load of twenty-four hours per week and in some cases thirty hours. This is little short of a crime. The teacher load should be reduced about one-half.

Every state normal school in the land should be put upon a college basis. I do not mean that there shall simply be inscribed the word "college" over the doors of these institutions, or that the word "college" shall be printed on the stationery, or that the catalogue of the institution shall be labeled "college catalogue," but I do mean that the buildings, the equipment, the laboratories, the libraries, the faculty, the entrance requirements, and the work of the institution shall all be placed on the level of a first-class college.

The teacher-training institutions are the backbone of a state system of education. They should be utilized more and more by

state departments in carrying out the state's program of education. A state which gives generous support to its teacher-training institutions is making the finest and wisest investment in public education. The measure of an efficient and progressive state system is the type of state normal schools or teacher-training institutions which the state supports.

But how are we to induce states to maintain institutions such as have been described? The responsibility rests largely upon the teachers and educational workers of the several states. Each state will maintain such leadership in education as its teachers demand. If teachers want a vigorous, progressive leadership, they can compel it, and when I say teachers, I mean superintendents and college presidents. We are all teachers. Teachers must bear the responsibility for many of the weaknesses and deficiencies in the public schools of today. We have been too cowardly. We have not had the courage to demand and fight for those advancements and reforms in education which we have known were essential to progress and to sound educational practice. When 800,000 teachers of America demand for the childhood of the country the educational opportunuities which are imperative for the training of good citizens, such opportunities will be provided. When all the educational workers of a state unite in one voice demanding that adequate facilities shall be provided for training the teachers of the state, such facilities will be forthcoming.

In 1919, just before I assumed the superintendency of the state of Pennsylvania, the legislature appropriated $1,500,000 for the support of thirteen state normal schools for a period of two years. By a little computation you will ascertain that this was equivalent to about $58,000 per year for each of these institutions. It was quite impossible to maintain a state normal school on that amount of money in 1919-20. The dormitories and dining-rooms were operated on a profit-making basis, and the amount paid by students for rooms and board was above operating expenses. A rich state was compelling young people of limited means to pay for their training as teachers to serve the state. These institutions struggled along as best they could for two

years, but of course at the end of that time each school had a deficit. The principals of these schools and the state department were then censured by some of the members of the legislature for not conducting these institutions on a sound business basis and operating them within their appropriations.

When we sat down with the appropriating committees of the legislature in 1921 and told them that it would require $5,000,000 to operate these plants during the next biennium, some of the committee members almost had an attack of apoplexy. I know from experience that members of such committees generally desire to treat the institutions fairly. It was incumbent upon us to show the committees that these funds were essential to the proper management of the schools. The $5,000,000 was appropriated, but even then the investment in that line of work was not adequate.

The training of teachers for public schools is the most vital obligation of the state to its public-school system. An adequate number and a better type of teacher-training institutions must be provided in each state. To accomplish this result much larger appropriations must be made for such institutions by every state in the Union. The teachers of each state must heartily cooperate with their state leadership in building and maintaining such institutions on an adequate basis. We must develop a public sentiment which will support generous state appropriations for this public enterprise.

While I am assigned the subject, "State System for Certification of Teachers," I have devoted the whole of my discussion to institutions for training teachers. The state should, in my judgment, prescribe a state-wide plan for the certification of teachers. It should specify the minimum standards that should prevail from one end of the state to the other. The right of any community to employ teachers of a higher standard of qualifications should of course be recognized. The right of the state to determine the minimum standard of qualifications for its teachers has been asserted in every state in the union. Standards have been written into the law of each state specifying certain qualifications, but in many states these standards differ according to

the classes of school districts, or the wealth, taxable property, or population of the districts.

This policy has been the one great evil in our state systems of certification of teachers. Throughout our whole history and in all parts of the country it has resulted in a discrimination against high standards in rural schools. The one place in our state school systems where high standards are most imperative is in the rural schools. The rural schools of the country will never be brought to that standard of efficiency which they deserve until the qualifications for teachers in such schools are made comparable with those required in our city school systems.

A boy or girl born in God's open country should not be penalized. A boy or girl born on a farm is of the same value and has the same inherent rights that a boy or girl possesses who is born in a city. The discrimination against boys and girls in agricultural regions which has been practiced all through our period of great industrial development, providing them with immature teachers, teachers of little education and no training, should be tolerated no longer. America is the richest country in the world; great inheritances in natural resources, inventive genius, and productive wealth have been handed down to the present generation. We owe much to future generations. We must make secure generations of citizens who shall preserve the traditions, ideals, courage, and strength of the fathers who founded the Republic. The best way to insure this is to supply all the children of the land, regardless of where they live, with able, wise, patriotic teachers. Our state systems of education should be reorganized to accomplish this result. By so doing we shall exemplify one of the cardinal principles of American education, "an equality of opportunity in preparing for American citizenship." The state, and even the nation, should make such appropriations as may be necessary to train these teachers and make them available for the schools. The American policy should be to provide as well-trained and as able teachers for the rural schools as for the city schools.

Another vital weakness in the systems of certification has been the issuance of certificates by local superintendents and on the

basis of local standards fixed by these superintendents. Nothing demoralizes and degrades a system of certification more than such practice. Local superintendents are subjected to all manner of pressure. The number who are able to resist such pressure and maintain any kind of integrity in their standards is small. In many cases such systems are perverted by superintendents themselves for selfish and political purposes.

I do not know that this plan prevails in Ohio. If it does, you progressive teachers should demand its discontinuance and the county superintendents should lead in the fight for such action. If your standards are low in Ohio, and it is evident from the address of the first speaker this morning that they are not high enough, the responsibility for a reform in this matter again rests with the progressive teachers and superintendents of the state.

I think it is a perfectly feasible proposition to show to any young person who is not qualified to teach the injustice he is doing himself and his pupils by attempting to teach. The honorable, just course for him to pursue is to qualify for his work before undertaking to teach. I cannot understand how a self-respecting person can go into a classroom to instruct children, to prepare them for citizenship, when he knows that he is not qualified for the service and that in undertaking the task he is robbing innocent children of their only opportunity to prepare for life.

I have had long experience in dealing with this problem. For more than thirty years I have shared official responsibility for formulation of state policies for the certification of teachers. You will not, I am sure, misunderstand me when I say that I have probably had as much experience in this field of public-school administration as any man in the country. My sins of omission and commission are many in this respect; when I reflect upon them I am overwhelmed with humiliation. I helped to develop one of the most perfect systems of teachers' examinations ever established. I have atoned for that action. After constructing this wonderful examination system, I aided in gradually eliminating it and in putting the certification of teachers in New York state upon a rational and sound basis. There is no greater load or burden on a plan for the certification of teachers than a local

or state system of examinations. Such measures to determine the qualifications of teachers are the most unrighteous and unscientific methods that can be employed. They should be eliminated from every state system.

But if examinations are to be eliminated, what is to be substituted for them in determining the qualifications of teachers? Education and training under competent teachers and in properly established institutions is to be substituted. No students should be admitted to membership in a teacher-training institution who has not completed a four year's approved course in a high school. The teaching profession should be made so attractive that the teacher-training institutions would secure their proportion of high-school students who made the best records during their school courses. The professional courses in the teacher-training institutions should not be shorter than two years; and should be extended to four years as rapidly as conditions will permit.

The plan of issuing permanent certificates or diplomas to students when they graduate from normal schools should be discontinued. The original certificate should be issued for not more than three years. If a teacher does satisfactory work during the life of this certificate, it should be renewed for five years. At the termination of this eight years' service the certificate should be made permanent on the following conditions: first, that the work of the teacher has been satisfactory and of such proved efficiency as to make it desirable to continue the teacher in service; and second, that the teacher has returned to the normal school and done such additional study as shall be specified under state regulations to become a permanent member of the teaching profession.

These teacher-training institutions should be under the general supervision of the state. The institutions supported and maintained by the state should be under its control. All such institutions which train teachers should be required to comply with state requirements and to be open to state inspection. I see no reason for a city to spend funds for the maintenance of an institution performing a state function. Such institutions should be supported, supervised, and controlled by the state.

It is to be expected that the cry of centralization of power

will be raised, and it will be charged that to place in the hands of one man the power to certificate the entire teaching force of a state, is to establish a powerful agency that will be used for selfish and political purposes. The rules created to govern these matters should be prescribed by the state council of education or some state body of like character, but only upon recommendation of the chief executive officer of the state school system. Authority of this character has already been vested in the heads of several state school systems and the anticipated evils resulting from it have not been realized.

An experienced administrator in state education does not desire power nor does he exercise much power. He must possess sufficient power to make his authority and responsibility respected. In the performance of his duties he will practice a devolution of authority; he will refer to every agency the function of doing those things for which it is best equipped. A demonstration of his power by arbitrary action will come only as a last resort and when such action is necessary as a wholesome influence or lesson to meet some administrative emergency.

The administration of these teacher-training institutions should be on as democratic a basis as possible. For instance, a state department should not write courses for state normal schools. These courses should be prepared by committees which represent the faculties of these schools and the state department. Before courses are prepared even by such committees, there should be the fullest and freest discussion possible in a joint meeting of these faculties and others interested in such problems. After the courses are prepared they should be subjected to similar discussion.

The most profitable meetings which I have organized have been those of the faculties of our teacher-training institutions. There is an enthusiasm and inspiration gained in these meetings that can be obtained in no other way. There is a breadth of view and judgment developed on school problems, and a common understanding reached through such meetings, which cannot be attained under any other plan. By this democratic procedure, placing responsibility where it belongs, demanding action from

those who should lead, there will come a quick response in the advancement and thoroughness of the general work of the schools, in the requirements for admission, and in the adaptation of course of study.

Something was said this morning about retaining in the state the graduates of a state's training institutions. There was a little indictment of myself by my old friend from New York and Illinois who charged that one year New York state took eighteen of the physical-training teachers, nearly the entire graduate body, from one of the state normal schools in another state. We also took a large number from the Springfield school and the Boston Normal Physical Training School. We did not go out in search of these teachers. A law had been enacted in our state creating a demand for such teachers. They came to us for these positions. Should we have been so inhospitable as to decline to receive them? Do you regard me as that kind of a man?

There is, however, something to be said about the obligation which a person assumes who enters a teacher-training institution supported by a state and agrees to teach a certain period of time in that state. The state is honorably entitled to the services of those who are trained at its expense. The person who receives such training is honorably required to render service to the state. Soon after we had employed these physical-training teachers from other states, a leading superintendent from Ohio came to New York and offered contracts to nearly thirty teachers in the graduating class of the Oswego state normal school. Why, that was almost committing grand larceny! We felt justified in refusing to graduate these students if they did not refuse the contracts and agree to teach in New York. We had positions for them and could offer them communities with as good climate as Ohio cities, even if the salary was not so high. There is danger in putting the bars up at state lines. Every community should employ at least fifty percent of its teachers from those educated outside of its own school system. It will be wholesome for states to receive a liberal supply of teachers from other states and to permit large numbers of its own teachers to go into other states. There should be no objection on the part of a state to allowing

a reasonable number of its normal-school graduates to go into another state, but it cannot afford to sanction a wholesale exodus of its normal-school product.

State departments waste too much time generally over reciprocity agreements. They too often stand upon their dignity to the detriment of teachers and schools. I have been an offender in this respect. What a lack of foresight for Pennsylvania, for instance, to put up a sign to the effect that "a teacher from Ohio shall not come into Pennsylvania unless Ohio will receive teachers from Pennsylvania." I am old enough now to know better than to proceed on that basis. Each state should open her doors and facilitate the exchange of successful, qualified teachers. Those coming into a state should show qualifications equal to those required of resident teachers. State authorities should encourage such teachers to come into their states and should accord them a hearty welcome and encourage the poor teachers to go elsewhere.

The first speaker this morning gave us some illuminating data on the supply, turnover, and placement of teachers. When he completes the study which he is making, we shall have a valuable contribution that will be very useful in treating many of these problems. Four years ago I created a placement bureau in the state department at Harrisburg and placed a trained man in charge of it. He kept in touch with the state normal schools and other training institutions and registered several hundred teachers. He also kept informed on vacancies that occurred in various parts of the state. On the request of superintendents, principals, and school boards he sent a list of the names of teachers whose training, experience, and credentials appeared to qualify them for the position under consideration. No teacher was recommended. Those seeking teachers were informed that recommendations would in no case be made. We did, however, put boards in touch with teachers and teachers in contact with employing authorities. Several hundred teachers obtained positions under this plan and several hundred boards procured teachers. The plan worked admirably but criticism was made by the purely commercial teacher agencies. This is a type of service which state departments should extend.

The time allotted to me has been fully occupied and I have not covered many features of this great problem. I shall be glad, however, to answer any questions which you may desire to ask.

DISCUSSION

Chairman: Now is the time to ask questions of Dr. Finegan.

Mr. Suhrie: Dr. Finegan, if I understand you, you were at least in part responsible in New York State for the development of a state-wide teachers' examination system. You told us you were willing to tear it down. Why?

Dr. Finegan: Because I found that we could get better teachers in another way. We found it was a useless load on the system. There are so many evils growing out of an examination system that it would take a long time to enumerate them all.

Mr. Suhrie: Would you please make that concrete by enumerating some of them?

Dr. Finegan: The principal reason why examinations were eliminated was that we discovered, when an examination was made of the basis of certification, that we were certifying some of the poorest product to become teachers. Those who were doing the poorest work in the institutions and whom competent teachers would not recommend were often certified. A knowledge of facts is not a fair substitute for thorough training and classroom work.

Question: Isn't it a fact, Dr. Finegan, that you can't do away with the examination until you get the schools to the point where their judgment is superior to that of the examination?

Dr. Finegan: Now, you are making that pretty broad when you say that the dictum of the schools shall be a very superior dictum.

Question: I mean this. Not until you get your teacher-training institutions so well organized, supported, and administered that their training is sufficient evidence of the teacher's probable success, is it likely that you can do away with the examination.

Dr. Finegan: It ought not to take a great many years to get the teacher-training institutions in any state in a condition so that the state will have confidence in them. Of course, if the

state does not have confidence in these institutions, then you could not do away with the examination.

Question: I see the slant to which this is going and I hasten to manoeuvre myself out of the position. I was only attempting to justify you in making an examination in your early days and repenting of it afterwards on account of a changed condition. In other words, I was trying to make it easier for you.

Dr. Finegan: Thank you, you are very considerate. But I have become so hardened and calloused in thirty years' work that a little thing like that does not disturb me. It didn't take us twenty-five years to get these institutions in shape so that we could accept their approval and we did not discard the examinations as soon as we might have discarded them. In Pennsylvania one of our first executive orders was to abolish an old, worn-out examination system and substitute a sound system of teacher training for it.

Question: Your department would not need to refuse certificates to graduates of a given institution more than one year.

Dr. Finegan: No. One impressive lesson of that kind would be ample. If these are the only questions you have, you are the most satisfied crowd that I have come up against in a long time. It has been a great pleasure to meet with you and I thank you for your courtesy.

Chairman: I think there are still questions that you wish to ask on one subject or another. I know from the short experience that I have had in Ohio in recent years that these folks are not the most easily satisfied crowd of people in the world. They are people who have many questions in their minds.

I see President Williams and a number of deans and college professors here who no doubt have other questions. We will take a few minutes to hear them. I think I will say that we will adjourn in ten minutes.

Dean Minnick: Mr. Chairman, I do not want in any way to attract your attention away from the most admirable address which we have just heard. There is one point, however, to which I wish to call your attention in the tendencies of teacher training in America.

We borrowed, strange to say, the narrow name and narrow curriculum for training elementary teachers from Germany, and the name from France. But no man west of the Allegheny Mountains any more says "normal schools." He says "teachers' college," because we have come to a basis of not admitting into the normal schools, formerly called, anybody who is not a high-school graduate and who is not able to work on a college level.

Now the people are demanding that their colleges be placed on a four-year basis, so that they will break down this tremendous hiatus or gulf between secondary teachers and elementary teachers, and they are supported in this demand by the American Association of Teachers Colleges, an organization now comprising practically all the colleges in America for the training of teachers.

This is a democracy, and in my judgment there should be no barrier which would divide the great teaching faculty; and the people are demanding that there should be no division. And so in America all the teachers' colleges are organizing and believing that the organization will take in not only the colleges and universities, but also the teachers' colleges with four-year courses, good faculties, and good curricula, so that the work done there will lead to a bachelor's degree, and the graduates may go to the state universities for their graduate work without having to take a long and terrible examination coming out from the two-year normal school.

And if my friend has visited Germany—I suppose he has, and France, too—he will know that in both those countries they have developed two distinct streams. The secondary schools have nothing to do with the elementary schools, won't associate with them at all. They were *"Königlische,"* the royal school. That is a wrong attitude for the great country of America to hold. We do not want any aristocracy in public schools. We want secondary education and elementary education to be of the same strength and for the same kind of people.

Now I want to say, Mr. Chairman, that the tendency is strongly in that direction. The people are demanding it. The teachers' colleges in the Middle West are building up strongly, and I might say that Dr. Suhrie's school is not a "normal school;"

it is called a "school of education," isn't it? We do juggle these words around a little, but nevertheless this is the tendency.

I want to ask that not only the city elementary teachers, but also the rural teachers shall have their training in the best college we have, so that they will have the same advantages. And that is a big point—the advantage of a complete college; you do not have any idea what a big advantage that is. It is not limited like the old normal schools of France and Germany, and they are very much more liberal, and they have a great many contributions which a two-year course cannot give. I am sorry to have taken so much time, Mr. Chairman.

Mr. F. R. Winters: I think we should emphasize the constructive features of the address and the constructive features of teacher training in Ohio. We want to face the fact that we have only four state normal schools or teachers' colleges in Ohio.

The legislature has not visualized at all the big problem of the training of a teacher corps for the state. You see, teachers' colleges are comparatively a new thing in Ohio. For several years they only tried to scratch a few of the corners for a few of the cities. It was not until 1914 that the thing was begun in any large way at all. We cannot begin to train enough teachers for the state of Ohio with the facilities of the present state normal schools. These facilities must be greatly extended. We must think of probably four more state normal schools and of subsidizing and extending them. And then we must think about the rural districts.

I want the audience to applaud loudly Dr. Finegan's statement that the rural pupil deserves the same quality of teaching that the city pupil has. There are a great mass of people in the Ohio rural districts, and there are a great many educational leaders who seem to forget that fact altogether. They say, "We must get the standard for teachers in Coshocton up high. We must have a high quality of teacher for Columbus. But we cannot expect anything in Hocking County; we must not expect a teacher with more than a tiny amount of training in the rural schools of Sandusky County. We cannot expect that at all. It would be too much expense. The schools of the rural districts

cannot afford teachers such as they have in Cleveland or even in Coshocton."

Now we must think more in terms of the teacher in the state. Dr. Finegan said there were 50,000 teachers in Pennsylvania; we will match that by 36,000 in Ohio. Then we will reduce that to so many per year, as Dr. Buckingham is going to do. I think there are 2,800 new teachers each year. You subtract from 2,800 the number being trained in the university and in the city normal schools, and you have a great big remainder.

Now, we ask this question. Can we afford to have that remainder of 1,600 teachers a year an utterly untrained body for the next year, or three, or five, or ten years, until the legislature establishes facilities such as Dr. Finegan has outlined? Can we afford it? Can we afford to have a whole generation of children in the rural districts taught by untrained teachers? That is a great big question. It is not a question for me to answer, but for you to think about.

Dr. Finegan recommends the abolition of the county normal classes. I am afraid that of the recommendations he has made, the destructive ones will be acted upon and what constructive recommendations he has made will be forgotten. It is easy to come to the legislature to cut off something, but it is hard to add something.

We can easily put on a destructive program for this state at the next session that will leave 1,600 rural positions filled by persons who are merely high-school graduates, but to get them taught by people with two years of normal training is going to be one of the most gigantic tasks ever undertaken by the educational forces of the state. That is going to be a matter of years.

So we want to be a little careful about taking up the destructive end of any proposition instead of putting emphasis on the constructive end. I agree with his constructive plans from the very start to the finish. It is right and ought to be put into effect. The only hope I have is that all the educational forces will work on the constructive side with all their might.

Chairman: Dr. Finegan has the floor.

Dr. Finegan: I want to say just a word on the discussion of

Dean Minnick. I am delighted that he raised the question. I would not have the impression left here that I am not in favor of placing teachers in the grades who have had as good training and as broad and cultural an education as those who are in the secondary schools. I believe in all that. I said that institutions which trained teachers should be brought to the full college grade in every particular, not merely in name. Remember I said to you that I did not simply want the word "college" written over the door or on the stationery or in the catalogue, but I wanted it in the equipment, faculty, work, and spirit of the institution. But I solemnly protest against writing over the doors of ordinary normal schools, the word "college," until such institutions are made of college grade. To do otherwise is to impose upon young people and offer them something which it is not possible to give them.

Four years ago we were confronted in Pennsylvania with 5,000 teachers in our elementary schools, not one of whom had had a day's training beyond that which they had received in the grades. Over one-half of all the teachers had received no professional training. Our normal schools were even admitting students direct from the grades. The first year we made the admission requirements to all of these institutions the completion of a four-year high-school course. We revised the professional courses and made them cover two years. The state is trying now to get a trained product with these limited qualifications in order to fill the schools by 1927. It was the intention of the state department to advance these courses to three years and four years as soon as conditions will permit it, but not until then. We paved the way for the expansion of state normal schools into colleges by amending the law to accomplish that end.

It is not necessary to go west of the Allegheny Mountains to discover teachers' colleges. I had much to do with one of these institutions for thirty years—one of the first organized in this country—the State College for Teachers at Albany.

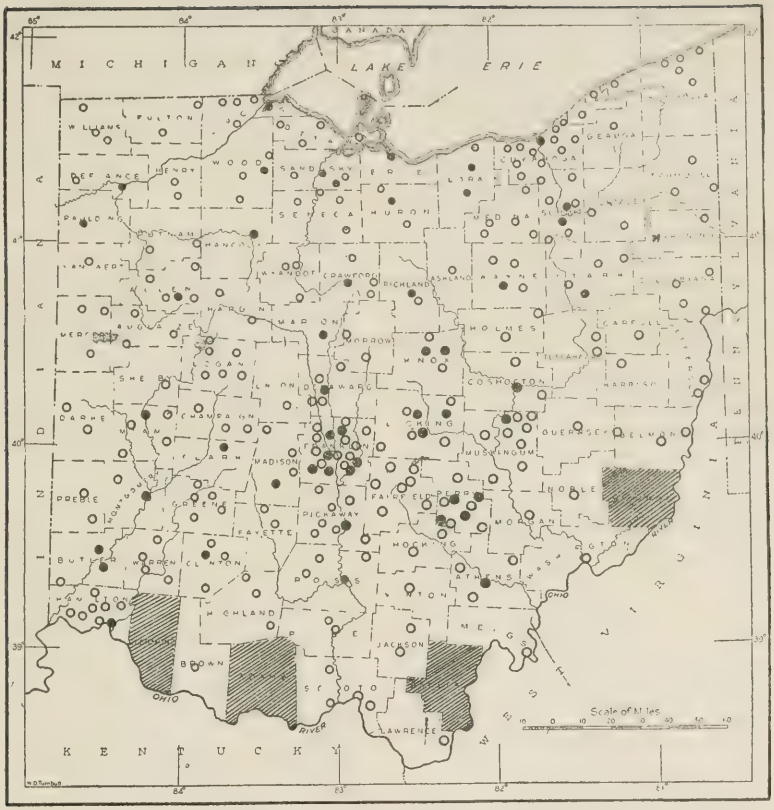
Now as to the local institutions to which Mr. Winters has referred, I have found in my experience that sometimes the way to build up is to tear down. The way to get constructive measures is to destroy those which are ineffective and those which are not

on a sound basis. And I should not hesitate one minute to go to a legislature advocating the abolition of local training institutions, but I should put it squarely before the legislature that in place of such institutions there should be erected and maintained adequate state institutions for the performance of this work. Such a procedure is constructive, not destructive. But until the legislature provides adequate state institutions so that all children may have qualified teachers, and so that all may, therefore, have equal training and equal opportunity, the state should maintain such institutions as it now has and improve them as it may.

Now there has not been a word said here this morning about the training of teachers in service, which is one of our greatest problems. There are many teachers in service who can be brought up to standard qualifications. It would take a whole hour to treat that problem as it should be treated. We set September 1, 1927, as the date when a teacher of high-school training and two years of professional training or the equivalent should be employed in every classroom in Pennsylvania. We took six years in which to put our house in order. The first year after our program was initiated, 30,000 teachers went into summer schools for eight weeks. Last year 30,000 attended again for eight weeks. Colleges and normal schools were filled to overflowing. Set the standards high, pay the salary which will attract teachers, educate the public to regard such an investment as the best that can be made, and we shall have no trouble in supplying teachers. It means a long campaign and hard work, but in the end it is profitable.

CHART 1. THE DISTRIBUTION OF DELEGATES ATTENDING CONFERENCE.

The circles indicate cities sending less than six representatives, the dots indicate cities from which six or more delegates were sent. The shaded portions were without representation.


CANADA
LAKE ERIE
MICHIGAN
INDIANA
OHIO
KENTUCKY
WEST VIRGINIA
Scale of Miles

INDEX

Ability grouping from the administrator's viewpoint, An, C. R. Wise, 284.

ABRAMS, ALFRED. Visual instruction, 102.

Adapting geometry to the present tenth-grade pupil, W. E. Lattin, 300.

American and European History, G. W. Knight, Ohio State University, Presiding, 96.

Applications of clinical psychology to the treatment of delinquency, C. W. Hoffman, 166.

An appreciation lesson for sixth-grade pupils, Emma Cooke, 217.

Art, J. R. Hopkins, Ohio State University, Presiding, 102.

BARNES, ELINOR J. Experimenting with Caesar classes, 295.

BARROWS, W. M. Demonstration of some methods of handling problems in biology, 112.

BERRY, C. S. Changing standards in special education, 341.

BERRY, C. S. Educational tests, the foundation of educational aims, 197

BIGELOW, M. A. The importance of science in high-school education, 315.

Biological Science, R. C. Osburn, Ohio State University, Presiding, 106.

BISSELL, W. L. Theme-marking: how much? to what end?, 240.

BOWERS, E. V. The outlining of some plan whereby adequate financial support through taxation may be assured to the public schools, 150.

BRADLEY, RUTH. A program for oral English, 221.

BRIM, O. G. Fundamental objectives in curriculum, 175.

BUCKINGHAM, B. R. Standards in education, 7.

BUCKINGHAM, B. R. Supply and demand in teacher training, 355.

Care and treatment of athletic injures, Wm. F. Roberts, 324.

CARLSON, F. A. Physiography and its relation to physics and chemistry, 314.

Changing standards in special education, C. S. Berry, 341.

CHARTERS, W. W. Success, personality, and intelligence, 24.

CHENEY, MARGARET. Dancing and its place in the curriculum, 329.

City Superintendents, Paul Stetson, Superintendent Dayton Schools, Presiding, 121.

Classification of mentally deficient and retarded children for instruction, J. E. W. Wallin, 154.

Cleveland's testing program, C. H. Mann, 194.

Clinical Psychology, H. H. Goddard, Presiding, Ohio State University, 154.

Commercial Education, W. L. Moore, principal, Longwood Commercial High, Presiding, 170.

Comparison of some recent first-year texts, A, Hazel Murray, 294.

CONLEY, MARGARET. Standards by which we judge the work habits of elementary-school children, 203.

Contemporary literature for high-school seniors, Laura V. Edwards, 228.

COOKE, EMMA. An appreciation lesson for sixth-grade pupils, 217.

Correlation of the course of study in hygiene with community interest, Helen M. Rice, 184.

County Superintendents, H. E. Hall, County Superintendent of Schools, Wood County, Bowling Green, Presiding, 175.

Course of study in junior high-school mathematics, The, EMMA KERSTING, 297.

CRAWFORD, J. P. W. Standards in modern language teachings, 306.

Dancing and its place in the curriculum, Margaret Cheney, 329.

DAVIS, B. M. The lower limit of training for teachers in secondary biology, 116.

DEARNESS, F. W. Remedial cases, 204.

Democratic school administration, A, V. T. Thayer, 242.

Demonstration of some methods of handling problems in biology, W. M. Barrows, 112.

DIETRICH, G. C. The outlining of some plan whereby adequate financial support through taxation may be assured to the public schools, 146.

Difficulties in problem solving, P. R. Stevenson, 190.

Discussion, E. D. Roberts, 250.

Economies in school-building construction, A. C. Eldredge, 121.

Economies to be effected by the reorganization of the teaching load in the high school, F. J. Prout, 141.

Economies to be effected in the supervisory and administrative organization, E. D. Roberts, 127.

Economies to be effected in the supervisory and administrative organization, C. R. Reed, 136.

Educational and Intelligence Tests, A. R. Mead, Dean, Ohio Wesleyan University, Presiding, 187.

Educational tests, the foundation of educational aims, C. S. Berry, 197.

Educational and intelligence test demonstration, Luella C. Pressey, 201.

EDWARDS, LAURA V. Contemporary literature for high-school seniors, 228.

EGE, OTTO. Shall Ohio have a department of visual instruction?, 104

INDEX—Continued

ELDREDGE, A. C. Economies in school-building construction, 121.

Elementary Principals, Jane Brereton, Principal Harvard School, Toledo, Presiding, 203.

Elementary Teachers, Lou H. Thompson, Principal, Fairwood School, Columbus, Presiding, 207.

ELLIS, WILLIAM J. The wider meaning of special education, 344.

English, J. V. Denney, Ohio State University, Presiding, 218.

EVANS, W. A. The place of extra-curricular activities in the junior high school, 290.

Experimenting with Caesar classes, Elinor J. Barnes, 295.

FINEGAN, T. E. Standards in state educational administration, 64.

FINEGAN, T. E. State system of certification of teachers, 365.

Forgotten fundamentals, Wm. McAndrew, 48.

FOULK, C. W. Some suggestions on teaching students how to study, 310.

Fundamental objectives in curriculum, O. G. Brim, 175.

GRAY, W. S. Reading instruction in the elementary school, 207.

HARBARGER, SADA. The value and use of personal conferences, 233.

HARRISON, F. A. The intelligence quotient used as a basis for vocational guidance, 170.

HARTWELL, E. C. Standards in education from the viewpoint of social service, 78.

High-school Latin under the compulsory education law, Harry L. Senger, 295.

High-School Principals' Association, E. F. Miller, Principal, Rayen High School, Youngstown, Presiding, 242.

HOFFMAN, C. W. Applications of clinical psychology to the treatment of delinquency, 166.

Home Economics, Maude Gregory Adams, Ohio State University, Presiding, 257.

How the junior high library differs from that of the senior high school, Edna M. Hull, 335.

How we teach the use of the library, Helen V. Lewis, 336.

HULL, EDNA M. How the junior high library differs from that of the senior high school, 335.

Importance of science in high-school education, The, M. A. Bigelow, 315.

Increasing reading ability, Marie Ryder, 216.

Industrial and Vocational Education, E. L. Heusch, Supervisor of Trades and Industries, State Department of Education, Columbus, Presiding, 261.

Inflation in education, T. C. Mendenhall, 32.

Intelligence quotient used as a basis for vocational guidance, The, F. A. Harrison, 170.

Intramural athletics, G. P. Ward, 319.

JOHNSTONE, E. R. Social objectives for subnormals, 348.

Junior High-School Principals, T. M. Muir, Principal, Lafayette Bloom Junior High School, Cincinnati, Presiding, 280.

KERSTING, EMMA. The course of study in junior high-school mathematics, 297.

LAKE, CHAS. H. What is the matter with the high school? 246.

LAKE, C. H. Why shall we teach science? 308.

Latin, Harriet R. Kirby, Hudson, Presiding, 293.

LATTIN, W. E. Adapting geometry to the present tenth-grade pupil, 300.

LEWIS, BURDETTE G. The application of scientific methods in welfare work, 156.

LEWIS, HELEN V. How we teach the use of the library, 336.

LIGHT, U. L. Some by-products of tests, 187.

Lower limit of training for teachers in secondary biology, The, B. M. Davis, 116.

McANDREW, WM. Forgotten fundamentals, 48.

McANDREW, WM. Pedagogues and politics, 86.

MANN. C. H. Cleveland's testing program, 194.

MARDIS, S. K. Objectives in organization, 176.

Mathematics, C. L. Arnold, Ohio State University, Presiding, 297.

MENDENHALL, T. C. Inflation in education, 32.

Modern-Language Section, G. R. Havens, Ohio State University, Presiding, 306.

MURRAY, HAZEL. A comparison of some recent first-year texts, 294.

MYERS, A. F. The plan of cooperation between the Board of Education of Athens and the Ohio University for observation and practice teaching, 358.

NEIL, THOMAS. A study of measuring ability in relation to various types of instruction in physical education, 322.

NISONGER, H. W. The problem method in science teaching, 106.

Non-Biological Science, A. W. Smith, Ohio State University, Presiding, 308.

Objectives in organization, S. K. Mardis, 176.

Ohio high-school athletics, J. W. Wilce, 252.

Ohio relays, G. M. Trautman, 328.

Outlining of some plan whereby adequate financial support through taxation may be assured to the public schools, The, E. V. Bowers, 150.

Outlining of some plan whereby adequate financial support through taxation may be assured to the public schools, The, G. C. Dietrich, 146.

Outlining of some plan whereby adequate financial support through taxation may be assured to the public schools, The, W. A. Walls, 152.

Part-time education and the public schools, R. O. Small, 261.

PATTERSON, J. R. Some materials found effective for remedial instruction in arithmetic, 189.

PATTERSON, LUCY. A project in journalism, 225.

Pedagogues and politics, Wm. McAndrew, 86.

Physical Education, Men's Section, L. W. St. John, Ohio State University, Presiding, 319.

Physical Education, Women's Section, Lydia Clark, Ohio State University, Presiding, 329.

Physiography and its relation to physics and chemistry, F. A. Carlson, 314.

The place of extra-curricular activities in the junior high school, W. A. Evans, 290.

The plan of cooperation between the Board of Education of Athens and the Ohio University for observation and practice teaching, A. F. Myers, 358.

Position, pupil, and preparation, J. W. Smith, 173.

PRESSEY, LUELLA C. Educational and intelligence test demonstration, 201.

Problem method in science teaching, The, H. W. Nisonger, 106.

Program for oral English, A, Ruth Bradley, 221.

Program for oral English, A, Barbara G. Spayd, 218.

Project in journalism, A, Lucy Patterson, 225.

PROUT, F. J. Economies to be effected by the reorganization of the teaching load in the high school, 141.

Reading instruction in the elementary school, W. S. Gray, 207.

Reading with high-school freshmen, Bertha E. Ward, 226.

REED, C. R. Economies to be effected in the supervisory and administrative organization, 136.

Remedial cases, F. W. Dearness, 204.

RICE, HELEN M. Correlation of the course of study in hygiene with community interest, 184.

ROBERTS, E. D. Discussion, 250.

ROBERTS, E. D. Economies to be effected in the supervisory and administrative organization, 127.

ROBERTS, W. F. Care and treatment of athletic injuries, 324.

RYDER, MARIE. Increasing reading ability, 216.

SAGE, E. T. Who shall study Latin? 293.

SAMPSON, H. C. Some problems of the problem method, 114.

School Librarians, H. S. Hirshberg, Ohio State University, Presiding, 333.

School librarian and the teacher, The, Estella M. Slaven, 333.

SEALE, E. C. Students' activities as related to the course of study, 180.

SENGER, HARRY L. High-school Latin under the compulsory education law, 295.

Shall Ohio have a department of visual instruction? Otto Ege, 104.

SLAVEN, ESTELLA M. The school librarian and the teacher, 333.

SMALL, R. O. Part-time education and the public schools, 261.

SMITH, J. W. Position, pupil, and preparation, 173.

Social and economic need for vocational guidance, The, D. L. Sollenberger, 171.

Social objectives for subnormals, E. R. Johnstone, 348.

Social problems involved in the junior high school, W. W. Wager, 287.

SOLLENBERGER, D. L. The social and economic need for vocational guidance, 171.

Some by-products of tests, U. L. Light, 187.

Some materials found effective for remedial instruction in arithmetic, J. R. Patterson, 189.

Some problems of the problem method, H. C. Sampson, 114.

Some suggestions on teaching students how to study, C. W. Foulk, 310.

SPAYD, BARBARA G. A program for oral English, 218.

Special Education, E. A. Doll, Ohio State University, Presiding, 341.

Standardizing instruction in high-school history, R. M. Tryon, 96.

Standards by which we judge the work habits of elementary-school children, Margaret Conley, 203.

Standards in education, B. R. Buckingham, 7.

Standards in education from the viewpoint of social service, E. C. Hartwell, 78.

Standards in modern-language teaching, J. P. W. Crawford, 306.

Standards in state educational administration, T. E. Finegan, 64.

State system of certification of teachers, T. E. Finegan, 365.

STEVENSON, P. R. Difficulties in problem solving, 190.

Students' activities as related to the course of study, E. C. Seale, 180.

Study of measuring ability in relation to various types of instruction in physical education, A, Thomas Neil, 322.

Success, personality, and intelligence, W. W. Charters, 24.

SUHRIE, A. L. Ways of developing initative in the student teacher, 363.

Supply and demand in teacher training, B. R. Buckingham, 355.

SWEETSER, R. H. What industry expects of graduates of industrial courses, 276.

Taking care of the junior high school, V. T. Thayer, 280.

Teacher Training, T. C. McCracken, Ohio State University, Presiding, 355.

THAYER, V. T. A democratic school administration, 242.

THAYER, V. T. Taking care of the junior high school, 280.

Theme-marking: How much? To what end? W. L. Bissell, 240.

Training children in budget-making, Grace G. Walker, 257.

TRAUTMAN, G. M. Ohio relays, 328.

TRYON, R. M. Standardizing instruction in high-school history, 96.

Value and use of personal conferences, The, Sada Harbarger, 233.

Visual instruction, Alfred Abrams, 102.

WAGER, W. W. Social problems involved in the junior high school, 287.

WALKER, GRACE G. Training children in budget-making, 257.

WALLIN, J. E. W. Classification of mentally deficient and retarded children for instruction, 154.

WALLS, W. A. The outlining of some plan whereby adequate financial support through taxation may be assured to the public schools, 152.

WARD, BERTHA E. Reading with high-school freshmen, 226.

WARD, G. P. Intramural athletics, 319.

Ways of developing initiative in the student teacher, A. L. Suhrie, 363.

What industry expects of graduates of industrial courses, R. H. Sweetser, 276.

What is the matter with the high school? Chas. H. Lake, 246.

Who shall study Latin? E. T. Sage, 293.

Why shall we teach science? C. H. Lake, 308.

Wider meaning of special education, The, Wm. J. Ellis, 344.

WILCE, J. W. Ohio high-school athletics, 252.

WISE, C. R. Ability grouping from the administrator's viewpoint, 284.